

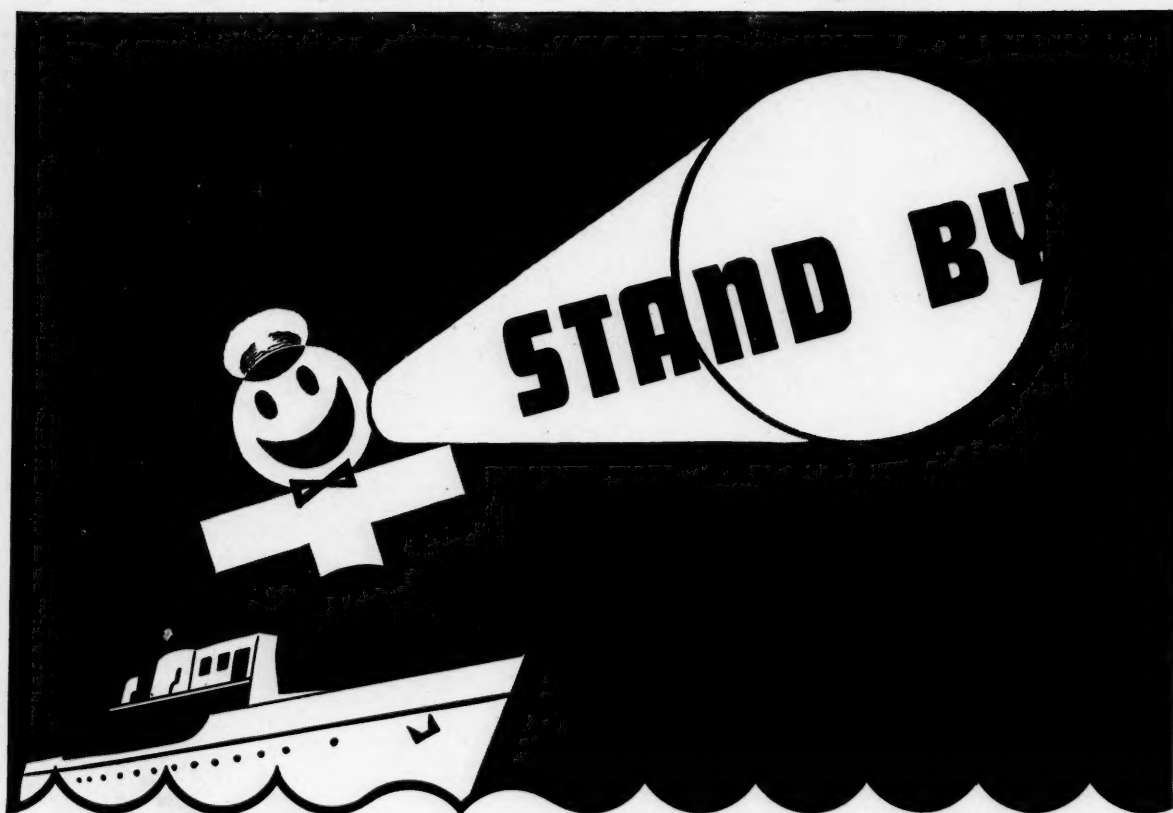
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THE MARINE CORPS GAZETTE

SEPTEMBER 1940

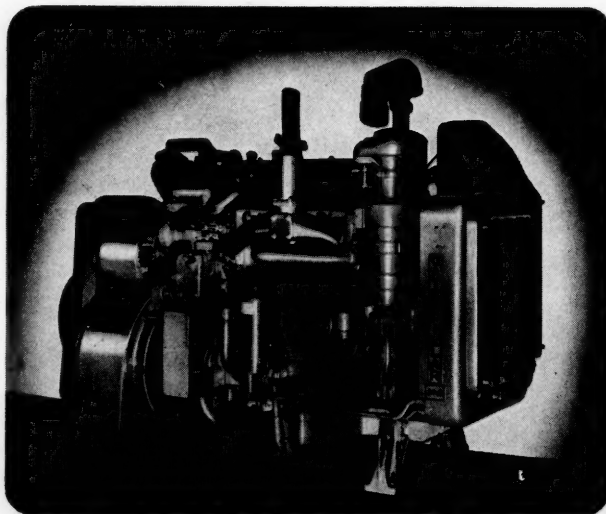
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In reference (a) [Let. Sec. Navy to MGC, March 8, 1939] the Secretary of the Navy has authorized "The Marine's Handbook," by Captain Luther A. Brown, U.S.M.C., published by the Naval Institute, Annapolis, Md., to be sold through all post exchanges of the Marine Corps and ships' service stores of the Navy patronized by Marine Corps personnel.

The 1939 edition was necessitated by a change in the Marine Corps Manual and in Marine Corps orders which prescribe the *Landing Force Manual, U. S. Navy, 1938*, in lieu of Army publications as the principal reference for basic training of Marine Corps enlisted personnel. This edition includes all the material necessary to bring it into agreement with the above change and contains 50 pages more than the 1938 edition. The retail price is the same, 75 cents postpaid; quantity orders, 15 per cent discount on 10 to 99 copies, and 20 per cent on 100 or more.

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THE MARINE CORPS GAZETTE

WASHINGTON, D. C.

Vol. 24

SEPTEMBER, 1940

No. 3

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All communications for the Marine Corps Association and THE MARINE CORPS GAZETTE should be addressed to the Secretary-Treasurer, Marine Corps Association, Headquarters, U. S. Marine Corps, Washington. Checks for payment of dues should be made payable to the Secretary-Treasurer.

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Accuracy Versus Volume CARDED in Rifle Fire

BY CAPTAIN S. R. SHAW
U. S. Marine Corps

WITH the modern trend toward increased efficiency in the weapons and services in all armies, it seems strange that there should arise any question of accuracy versus volume in rifle fire, and especially strange that the question should arise in this country, in view of the early history of American armed forces. But of late years the remark is often heard that it is a waste of time to attempt to teach men to shoot accurately.

In support of these remarks several arguments are brought out for depending on the volume of fire alone to make riflemen effective. These arguments can be boiled down to one of the following three statements:

- (1) Volume of fire is more effective on the battlefield than accuracy;
- (2) In wartime there will not be sufficient time to teach raw recruits accuracy with the rifle along with all the rest of the necessary details;
- (3) With the adoption of semi-automatic rifles, the volume of fire will be such a veritable hail of bullets sweeping over the enemy that accuracy, even if attainable, will be unnecessary.

Perhaps it would be best to examine each of these in turn, for if the first is correct, then there is no need of the other two. And if the second is true, then there is no need of the third. And if the third is true then the quality of our infantry will depend almost solely on the capacity of our ammunition factories, and, of a more doubtful nature, the capacity of the supply system under battle conditions.

DISPERSION LADDER
IN RANGE
or
100% RECTANGLE

2%
7%
16%
25%
25%
16%
7%
2%

one probable
error



Direction of Fire

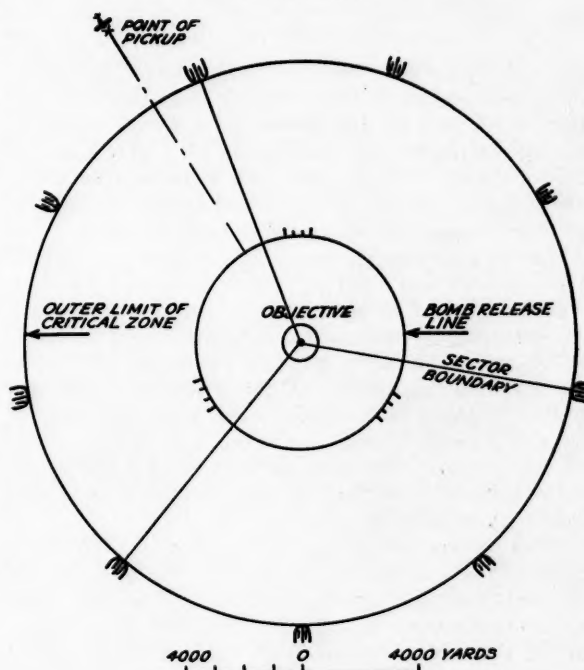


FIGURE ONE

In examining the first statement that volume is more effective on the battlefield than accuracy, we will first examine it from the theoretical standpoint, and then practically as tested by actual events in past history.

In examining the theoretical value of fire we enter into the domain of mathematical probabilities. This science has shown that for any weapon or group of weapons, firing at a given target, the fall of shots will be grouped in a rectangle known as the 100% rectangle or dispersion ladder (See Figure 1). This rectangle is much greater in range than in deflection. In range it can be divided into eight strips, or width equal to $\frac{1}{8}$ of the total length of rectangle, and normal to the line of fire. The width of this strip is known as the "probable error." The two strips on

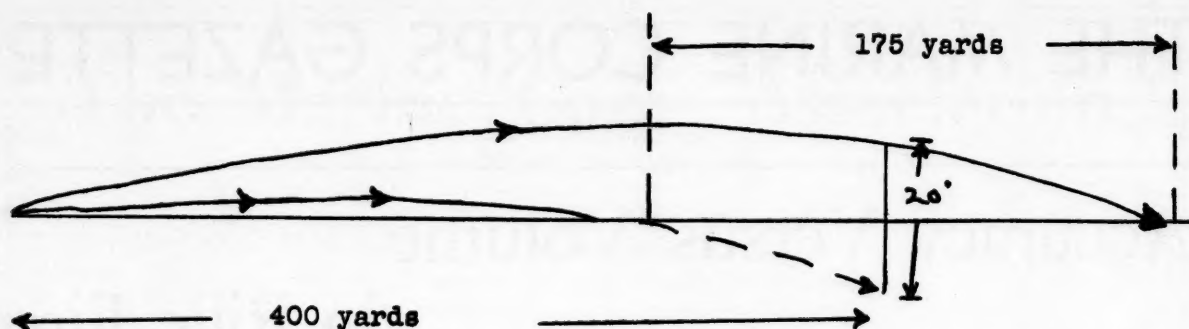


FIGURE TWO

NOT TO SCALE

Schematic illustration of pattern on the ground fired by a shooter who has no shot outside of a 20-inch bull's eye. The center of the bull's eye is placed at ground level.

each side of the center line will each contain 25% of the shots, the next two on either side, 16% ; the next two 7% ; and the last two, the one farthest away from the weapon and the one nearest, will each contain 2%. This same pattern of the fall of shots holds good both for shots falling on the horizontal plane of the ground and for the shots in a vertical target intercepting the paths of the shots.

Now let us assume an impossibility, namely that we have a group of riflemen, rifles and ammunition that are perfect. And for a target let us assume an enemy platoon on a gentle hillside, and that our riflemen have located the target well enough to know that all of the enemy riflemen (let us say 30) are within an area 200 yards long by 25 deep, and further, that none of the enemy is dug in and each is 6 feet tall and 18 inches wide, so that he occupies one square yard on the ground. This gives us an area of 5,000 square yards, scattered about in which are little plots of one square yard, each occupied by an enemy.

If we assume another impossibility, that the 100% rectangle of our shooters will exactly cover the area, none of the shots ever missing, what will result if we fire 1,000 rounds at the area? It will mean that there is one chance in five that any particular square yard will be hit. And for our 30 men in the area, the chances are 150 to one against any particular man being hit.

If, with this perfect shooting, no shot ever falling outside of the area, we fire 3,000 shots into the area, the chances are 50 to one against any particular enemy getting hit.

Getting down into the realm of possibility, let us assume that we have a group of expert marksmen who never miss a 20 inch bullseye at 400 yards, and assume that the range to our 30 men in the 5,000 square yard target area is 400 yards. (See figure 2). If this group of experts have them all in the black, some just in at six o'clock and some just in at twelve o'clock, they have a pattern on the horizontal ground of approximately 175 yards. But our target is only 25 yards deep. How many of our shots will go into the area?

Now we must go to our tables of probability. We will assume that the target area is on a rather steep slope so that the actual length of the shot pattern is foreshortened 25

yards, leaving us a pattern of 150 yards. The width of the probable error, or one-eighth of 150 yards, is 19 yards. Then by the method of calculating probabilities, we divide the target depth, 25 yards, by twice the probable error, or 38 yards. The result, or 0.65, is the probability factor with which we enter the table of probabilities and we find that we can expect only 34% of the shots to hit in the required area. In other words, for each 1,000 shots fired we can expect 340 shots to hit in the area.

This means that for 1,000 shots, the chances against any particular one of the 30 enemy in the area being hit are 450 to one. If 5,000 shots are fired into the area, the chances against any particular one of the enemy being hit becomes 90 to one.

The prospects of our expert riflemen do not appear to be very bright. However, they will not be merely trying to spray an area. They will be trying to hit certain individual spots they have selected as the hiding place, or probable hiding place, of an enemy rifleman. Now their chances become much brighter. For, going back to the range ladder, we can expect 50% of the shots to fall within a space 19 yards short of the point of aim, and 19 yards over the point of aim. For each ten shots, 5 will fall within 38 yards of him. And that means that the chances against the enemy being hit are less than 10 to one.

Using the same reasoning, if our shooters should all be marksmen, and being generous to them, we will assume that firing at a twenty-inch bullseye they never get anything worse than twelve o'clock and six o'clock fours. This gives them a pattern on the ground of approximately 300 yards. Taking off 25 yards for the foreshortening effect of hill slope we get a pattern over the target of 275 yards, yielding a probable error (one eighth of the dispersion) of 34 yards. Making the same calculations, we find that we can expect 20% of the shots to hit in our target area. This means that when we just shoot at the area the chances are 750 to one against hitting any of the enemy riflemen.

But here again we really have a much better chance of hitting, as we are not shooting at an area, but our men are shooting at spots where they think the enemy is, due to seeing him, or the flash and smoke of the enemy rifle, or movement, or just because it looks like a good place for an enemy to take cover to shoot from. This means that 50% of the shots will fall within two probable errors of the point of aim, or within 68 yards, bringing the chances of the enemy being hit down to less than 20 to one.

Note that these percentages of hits expected are for men who have been trained. For even the marksmen have re-

ceived the same amount of training and teaching in shooting as the experts, the only difference between them being that the expert has absorbed the training better.

In consideration of the above it can be seen how little effect can be hoped for from men that have received little or no training beyond how to load and which way to point the rifle. For the shot pattern of untrained men will make the 300-yard pattern of the marksmen seem small. Firing at any range it would be generous to estimate their pattern as small as 500 yards. And with a pattern such as this it would take a tremendous number of rounds to secure an effective volume of fire in any particular target area.

It will be noted that in the above discussion the matter of dispersion in deflection has not been considered. This is because at ranges under 600 yards it can safely be assumed that no man who can shoot as well as the marksmen used above (who could hardly be called good marksmen) would be off as much as a point in his wind estimation. But this assumption does not hold with untrained or only partially trained men, for even with perfect wind estimation their errors caused by faults in aiming, holding and trigger squeeze will be such as to cause a deflection pattern almost as large as their range pattern.

So it would seem from the theoretical standpoint, mere volume of fire is not enough; that this volume must be reasonably accurate if our riflemen are to be effective.

However, those who propose to substitute volume for accuracy raise the reasonable objection that the above calculations depend upon the shooters knowing the exact range to set on their sights. They say that in battlefield conditions the range will be estimated and that errors in this estimation will be such as to cause the shot pattern to completely miss the target and even the target area.

This condition is not quite true in dealing with a modern battlefield. For it only holds true for ranges over 500 yards. As Generals von Rohne and von Ploennes of the German army, General Parravicino of the Italian army, and Lieut. Colonel Eames of the United States army determined, both by theoretical and mathematical calculations and by experiment, at ranges under 500 yards the errors in aiming have a greater effect than the errors in range estimation. The calculations were made for, and the experiments made with, the Springfield rifle and 1906 ammunition in the United States, and with rifles of very nearly the same characteristics in Europe. Using the higher velocity, flatter trajectory M-1 ammunition it is more than likely that the range at which precision in aiming begins to have a greater effect than errors in range estimation has been increased to 600 yards.

From theoretical calculations we can only draw the conclusion that we can expect far better results from accurate rifle fire than from a large volume of fire from poorly or partially trained troops.

How does this compare with the results obtained in the actual history of warfare?

To obtain this comparison it should be possible to go as far back as recorded history to study the effect of missiles projected at the enemy. However, we will go back no further than the Hundred Years War between England and France.

In this intermittent struggle, lasting the major part of a century, the English forces won the major part of the

battles and the English longbowman was the chief factor in winning the victories. The results these longbowmen obtained were not caused by mere chance. For the English law required every man between the ages of sixteen and sixty to practice with the longbow. The requirements of the law were enforced; but their enforcement required little effort, for in a manner quite similar to our own rifle matches, longbow contests were held in every shire and district, the winners progressing to matches where winners of smaller matches were pitted against each other. All winners received substantial prizes. In addition to the material prizes, there were the more intangible ones of the fame of the winner, and the honors and attention given by the nobles and gentry to those who excelled.

Jumping over the several centuries during which fire arms were being developed, and during which, for numerous reasons, accuracy on the part of foot troops using shoulder weapons had little attention, we come to the French and Indian Wars. Here the modern use of infantry was faintly foreshadowed. Not the only instance is the oft-repeated tale of the defeat of Braddock's regulars by a force of French and Indians. Here the use of well-aimed fire from dispersed groups of riflemen, taking every advantage of cover, showed its effectiveness. But the British, characteristically perhaps, declared that there were no new lessons to be learned from these defeats, and that they were entirely due to the "peculiar circumstances" of colonial warfare.

Again during the American Revolution the British found that the "uncouth" American farmers and backwoodsmen were often more than a match for their regular fighting in close order and using volley fire at close range. With their superior marksmanship, and confidence in that marksmanship, the Americans often opened effective fire before the British considered they were within range. In fact, in self defense, the British imported several Jagers (sharpshooter) battalions recruited from among the hunters of the German forests. Some of the well known instances are the battles of Concord and Lexington, Bunker Hill, Saratoga and Kings Mountain. But in many of the smaller actions the superior accuracy in shooting of the Americans was often a telling factor.

This time the British learned their lesson, for under the influence of Sir John Moore they formed several rifle regiments, later, in 1800, to be formed into the King's Rifle Brigade. These troops, especially trained in the use of the rifle, were to be the backbone of the British forces in the Peninsular War, and Napoleon's veterans were to fear them as the "only troops in Europe who had sights on their rifles and took aim when firing."

American forces once again proved the value of accurate shooting in the war of 1812. In Steele's "American Campaigns" is the statement that "wherever our troops attained victory the success was due not to good tactics but to courage and good marksmanship." The accent on marksmanship was especially notable in the Battle of New Orleans. In this action the Americans, for the most part Tennessee and Kentucky backwoodsmen armed with their "squirrel-guns" and trained to shoot so as to "put meat in the pot with one shot," lost 71 killed and wounded. Pakenham's regular British troops, veterans of Napoleonic Wars, lost over 2,000, mostly killed, with a large percentage of officers

killed. Many of these British officers had only one wound, a rifle ball in the head.

Following this war, there being no marked development in the rifle, European armies made no advance in the training of their foot-troops in their weapons. They tended to follow closely the Frederician line of thought, where the density of fire placed on the enemy was not increased by decreasing the pattern size, but by increasing the number of men per yard of the firing line. However, in the Mexican War once again the Americans, using militia troops composed largely of backwoodsmen, demonstrated the value of having a large number of hits per round per minute.

The greatest war of modern times, prior to World War I, was the American Civil War. Here, most military commentators are agreed, one of the initial advantages of the Confederacy was the fact that the majority of her troops were accustomed to the use of fire arms and were well practiced in them, due to the Southerners' fondness of hunting and sports of the field in the well-to-do classes, and the necessity of the poorer classes to get wild game to help feed their families. In contrast, many of the Northern troops were city-bred, ill-acquainted with weapons, and many units were newly arrived European immigrants who had never been allowed to possess firearms in their original homes.

The next major war, or rather series of wars, was Bismarck's three wars against the Danes, the Austrians and the French. The Prussians overwhelmed their poorly trained and badly equipped opponents.

In the Franco-Prussian war one of the prime reasons for the French confidence was the possession of a rifle superior to that with which the Germans were equipped. The French rifle was the "chassepot," the German, the older "needle-gun." The chassepot was superior to the needle-gun in both range and accuracy and was capable of being fired at eleven rounds a minute compared with the needle-gun's five rounds a minute.

The possession of a superior rifle was not enough to overcome the French lack of training in its use. The French held little or no training in marksmanship. The Germans held a large amount of both marksmanship and musketry training at ranges up to 900 yards. (This range was not excessive in view of the still prevalent custom of maneuvering troops in masses on the battlefield). The value of this training was shown early in the war, especially at the battles of Metz and Worth. In these two engagements the Germans received little support from their artillery. Diregarding the rather ineffective but voluminous French fire, the German foot-troops pushed in, with their inferior weapons gained fire superiority over the French with their superior weapons, and soundly drubbed the Frenchmen. And not the least factor in the French defeats was the fact that their troops, poorly trained in handling their weapons, often fired so fast with no results, that they were out of ammunition before the battle was well-commenced.

Following the Franco-Prussian war there was a development of firearms that was to completely change the character of actions on the battlefield. In the course of a few years the rifle was to reach a stage of development that was little short of its present designs. And the develop-

ment of the machine gun was to increase tremendously the power of the defense.

The development of the rifle was demonstrated by the action of the Boer wars. These modern rifles, coupled with the accurate shooting of the Boers, were a major factor in the campaigns. The Boers had little artillery and less ammunition for it, seldom had as many as 30,000 men in the field, and these in small scattered units. But the men they had were accustomed from childhood to handle firearms and were almost to a man experts in the use of the rifle in the field. Their ability with the rifle was to be so effective that the whole weight of the British Empire had to be employed in order to crush this handful of men, whose chief military characteristic was their accurate shooting and supreme confidence in their use of the rifle.

In the battle of Majuba Hill in January 1881, 350 British Infantry under the command of General Colley had occupied a defensive position on the hill. Two hundred dismounted Boers commenced an attack early in the morning. Here, if never before, was the value of accurate marksmanship demonstrated. Neither side had artillery and the issue was decided solely by the fire of the riflemen. Ninety of the Boers took covering positions in small groups at ranges up to 900 yards from the British, 60 advanced on the British position from the north and 50 from the east. In a short while the battle was over with the Boers in possession of the hill, and most of the British too. The British lost 118 killed, 128 wounded, and 58 captured, a total loss of 304, the remainder managing to escape. The Boer loss was 1 killed and 5 wounded.

The British with a strength of almost twice their opponents, in a commanding defensive position, had been almost annihilated, suffering a loss of 50 men for every casualty on the Boer side. The British reliance on volume of fire, with little training in marksmanship, had caused them to suffer a disastrous defeat when opposed by men whose measure of fighting was NOT rounds per minute, but HITS per round per minute.

This is especially made clear in the "German official account of the War in South Africa," where the effect of the Boer fire is described thus, "Every attempt of an English rifleman to raise himself or leave his cover was stopped by the well-aimed hostile fire." While the large number of English dead is yet another proof of the English soldier's courage and stamina, when compared with the Boer losses it is even more convincing proof that in war as in any other trade or profession, the workmen must have a thorough knowledge and mastery of the tools of their trade.

Incidentally, it is interesting to note that one of the surviving Englishmen in this battle was a young subaltern by the name of Ian Hamilton. We will come across his name later in this article.

The lesson as to the value of accurate shooting, as in the case of the French and Indian wars, was to be largely disregarded by the British until taught the second lesson in the second Boer War.

When the British went into this war, as the German official account describes it, they still relied on volleys by platoon, "for fear that the fire would get out of hand." For rifles they were armed with the Lee-Metford, which compared quite well with the Boer Mauser. However, the British had so little knowledge of the rifles that Col. Mayne

in his book, "The Infantry Weapon," says that "The Boer War had actually begun before the British discovered that their rifles shot 5 inches to the right for every 100 yards of range."

From the very first action and throughout the course of the war, the superiority of the Boer's rifle shooting was a decisive factor, continually affecting the British actions and dispositions, time after time causing the British to be defeated, and forcing them to eventually go to the expense and large operations of a major war. There is hardly a page of the "German Official Account of the War in South Africa" that does not mention the effectiveness of the accurate Boer rifle fire. And the same can be said of almost any other account of the war. In some of the firsthand accounts by British participants in the campaign, the British writers seem to imply that it was not quite cricket for the Boers to hide behind cover and calmly shoot down the British troops, who could not make any effective reply with their own rifles. And they grew quite disgusted with the Boer practice of withdrawing before an imminent bayonet charge (whenever the British, by tremendous superiority in artillery support managed to get within assaulting distance) to take up another position, thus forcing the "glorious" (but poorly-trained) British infantry to go through again the agonizing process of advancing through well-aimed rifle fire to which their own reply was ineffective.

To attempt to enumerate or describe all of these actions would take a large book. To mention a few may suffice to give a general picture. Time after time small bodies of Boers, sometimes as few as eighteen, would hold several

British battalions at bay for hours, until the British withdrew, or were relieved by the fire of artillery. At Sand River 3,000 Boers held 30,000 British off for four hours, at a range of 400 yards or over. At Nicholson Nek, in a defensive position, 1,100 British were killed or captured by less than 900 Boers. Col. Balck, the German tactician, in the first volume of his book on tactics, describes the action of Modder River as follows, "The British were paralyzed for 10 hours by fire commencing at 1,000 meters. Any attempt to return the fire or to crawl attracted such deadly fire, that all attempts were abandoned."

A typical action was that of Magersfontein. The Boers, in a defensive position, numbered between 5,000 and 6,000 with 10 guns, only five of which were field guns, the others being noisy but ineffective "pom-poms." The British had an effective strength of 10,200 rifles, 900 sabers and 33 guns, five of which were the more powerful naval guns. The British attacked at dawn. At the end of 12 hours of fighting the British withdrew under cover of darkness with the loss of over 13% in casualties compared to the Boer loss of 250 casualties. The British losses were almost entirely due to rifle fire, as the Boer guns took little part in the fight, due to lack of ammunition and to being neutralized by the fire of British guns when they did open up. On the other hand, the Boer losses were almost entirely due to shell-fire, the British guns, organized into six batteries firing around 1,000 rounds per battery. During this fight many of the British infantry quickly exhausted the

(Continued on page 48)



September activities in the Carpathian Mountains in Galicia. Plate courtesy The Field Artillery Journal

Marine Corps National Match Rifle & Pistol Teams 1940

SHORTLY after 10:00 A. M. on Saturday, September twenty-first, 1940, Gunnery Sergeant Robert A. Schneeman, U.S.M.C., fired his twentieth and last shot for record in the National Rifle Team match at Camp Perry, Ohio. When that shot was marked and scored a "5," it gave the Marine Corps Rifle Team a total score of 2,833 for the match; five points under the record score of 2,838 made in 1927; thirty-two points more than the second place Infantry Team; with its 2,801; and possession of the National Trophy for the fifteenth time since the inception of the National Matches in 1903.

The Marine Corps may be justly proud of its rifle and pistol teams this year. Major Morris L. Shively, team captain; Major Andrew J. Mathiesen, team coach; Chief Marine Gunner Calvin A. Lloyd, assistant coach (rifle); and Marine Gunner James R. Tucker, assistant coach (pistol), deserve the praise and congratulations of the entire Corps for the excellent results which they attained.

Owing to the late date of firing the National Matches this year, it is impossible to get the complete story in the present issue of the GAZETTE. This will be published in the November issue.

UNITED SERVICES OF NEW ENGLAND MATCHES

AT THE conclusion of the training period at the Marine Corps Small Arms Firing School, in preparation for the National Matches, the Marine Corps Rifle and Pistol Team participated in the United Services of New England Matches held at Wakefield, Mass., during the period July 20 to 28, 1940. The Marines won 17 out of 25 rifle and pistol (individual and team) matches for a total award of 16 trophies and 61 badges. The results of the matches were as follows:

RIFLE MATCHES

	Score	
ROGER WILLIAMS—Course: 10 shots 200SF		
Won by Sgt. Rames O. DeLaHunt, USMC	50-13v	Trophy
2nd—Pfc. George Kross, USMC	50-9v	Badge
3rd—Sgt. Charles R. Guilbeau, USMC	50-9v	Badge
QUIMBY—Course: 10 shots 600SF		
Won by 2d Lt. William A. Stiles, USMC	50-9v	Trophy & badge
2nd—Cpl. Carl L. Propst, USMC	50-8v	Badge
3rd—1st Lt. Edwin L. Hamilton, USMC	50-8v	Badge
NIEDNER—Course: 10 shots 200RF		
Won by Plat. Sgt. Raymond D. Chaney, USMC	50	Trophy
2nd—Sgt. Rollin W. Shaw, USMC	50	Badge
3rd—MGSgt. Thomas J. Jones, USMC	50	Badge
CUTTING—Course: 10 shots 1000SF		
Won by Plat. Sgt. Steve Disco, USMC	50-12v	Trophy
2nd—Sgt. Claude O. Foster, USMC	50-12v	Badge
3rd—Sgt. Thomas R. Mitchell, USMC	50-11v	Badge
26TH DIVISION—Course: 10 shots, 300RF & 600SF		
Won by J. Svela, U. S. Infantry	99-7v	Trophy
2ND BATTALION—Course: 10 shots 200SF standing		
Won by 1st Lt. Edwin L. Hamilton, USMC	50-3v	Trophy
2nd—Pfc. Mark W. Billing, USMC	49	Badge
UNITED SERVICE (4-man team)—Course: 200SF, 200RF, 300RF and 600SF		
Won by U. S. Infantry	772	Individual Trophies
2nd—Marine Corps	771	Individual Badges
ARMY ORDNANCE (2-man team)—Course: 10 shots, 200 & 300RF target "A"		
Won by U. S. Infantry	197	Trophy & individual badges
2nd—U. S. Coast Guard	196	Individual badges
3rd—Marine Corps	195	
CAMP CURTIS GUILD—Course: Surprise fire, 200yds, 16 shots, standing		
Won by P. Goulden, U. S. Coast Guard	78-7v	Trophy & badge
3rd—Pfc. Magnus D. Schone, USMC	76-6v	Badge

	Score	
THE CONNECTICUT V-5—Course: 20 shots, 600 Vs & 5s only count for score		
Won by Plat. Sgt. Robert E. Schneeman, USMC	100-16v	Trophy & badge
2nd—Pfc. Mark W. Billing, USMC	100-14v	Badge
3rd—Sgt. Waldo A. Phinney, USMC	100-14v	Badge
4th—Plat. Sgt. Bennie M. Bunn, USMC	100-13v	Badge
THE GOVERNOR'S—Course: 10 shots, 200, 600 and 1000SF		
Won by Sgt. Thomas R. Mitchell, USMC	147-17v	Trophy & badge
2nd—2d Lt. William A. Stiles, USMC	147-15v	Badge
3rd—Capt. David S. McDougal, USMC	147-13v	Badge
241ST COAST ARTILLERY—Course: 10 shots, 1000SF		
Won by Cpl. George W. Howe, USMC	50-6v	Trophy & badge
3rd—1st Lt. Edwin L. Hamilton, USMC	50-4v	Badge
THE WOOD—Course: 10 shots, 200 and 300RF		
Won by Sgt. Claude O. Foster, USMC	100	Trophy
2nd—Capt. David S. McDougal, USMC	100	Badge
3rd—Cpl. William L. Jordan, Jr., USMC	99	Badge
MILITARY ORDER OF THE WORLD WAR—Course: 10 shots, 600 and 1000SF		
Won by 1st Lt. Edwin L. Hamilton, USMC	99	Trophy & badge
2nd—Pfc. Ralph C. Cox, USMC	99	Badge
MARINE CORPS LONG RANGE—Course: 10 shots per man, 600 and 1000SF (2-man team match)		
Won by U. S. Infantry	197-26v	Trophy & individual badges
2nd—Marine Corps	196-17v	Individual badges
Cpl. Fred H. Butcher, Sgt. Rames O. DeLaHunt		
WALKER—Course: 10 shots, 300yds, SA pistol target		
Won by Sgt. Claude O. Foster, USMC	99	Trophy
2nd—Pfc. Mark W. Billing, USMC	96	Badge
3rd—Capt. David S. McDougal, USMC	96	Badge
LOMBARD—Course: Surprise fire 200yds.		
Won by Sgt. Waldo A. Phinney, USMC	49-6v	Trophy
2nd—GySgt. Claude N. Harris, USMC	49-5v	Badge
STANCHFIELD—Course: 10 shots, 200 and 300RF (4-man team)		
Won by U. S. Infantry	387	Trophy & individual badges
2nd—Marine Corps	387	Individual badges
HAYDEN TROPHY—Course: National Match (10-man team)		
Won by U. S. Infantry	2879	Trophy & individual badges
2nd—Marine Corps	2878	Individual badges

PISTOL MATCHES

SERVICE PISTOL—Course: 10 shots, 50SF, 25TF and 25RF		
Won by Plat. Sgt. Thurman E. Barrier, USMC	276	Trophy
2nd—Cpl. William E. Fletcher, USMC	275	Badge
3rd—Plat. Sgt. Robert E. Schneeman, USMC	275	Badge
SERVICE PISTOL—(4-man team)—Course: 50SF, 25TF and 25RF		
Won by Marine Corps	1096	Trophy & individual badges
CUTLER—Course: 20 shots, 25SF		
Won by Mr. L. W. Swift, civilian	200	Trophy
2nd—Sgt. John E. Heath, USMC	199	Badge
3rd—Plat. Sgt. Thurman E. Barrier, USMC	199	Badge
KELLERS—(4-man team)—Course: 20 shots, 25SF		
Won by Marine Corps	791	Trophy & individual badges
INDIVIDUAL PISTOL—Course: 20 shots, 50SF		
Won by Plat. Sgt. Thurman E. Barrier, USMC	189	Cash prize
JASWELL—Course: 10 shots, 50SF, 25TF and 25RF		
Won by Plat. Sgt. Thurman E. Barrier, USMC	291	Trophy
2nd—Sgt. Vito Perna, USMC	289	Badge

Six members of the Marine Corps Rifle and Pistol Team participated in the Sixth Annual Pistol Tournament of the Providence Police Revolver and Athletic Association held at Sockanosset Hill, Garnston, R. I., on July 13 and 14, 1940. The Marines won 5 out of 9 matches for a total award of 5 trophies, 9 gold and 7 silver badges. Two of the team matches, the Col. Joseph S. Samuels and the James Hanley Co., were won with record scores of 1448 and 1183 respectively.

In the Northeastern Regional Pistol Tournament conducted by the East Longmeadow Rod and Gun Club at Hampden, Mass., on July 20 and 21, 1940, the Marines won 3 first and 9 second places and were awarded 3 gold, 9 silver and 7 bronze badges.

NATIONAL RIFLE ASSOCIATION MATCHES

Camp Perry, Ohio, 7 to 19 September, 1940.

RIFLE MATCHES		Score	Badge
MEMBERS' TROPHY—(1635 entries)—10 shots 600SF			
Won by Sgt. William D. Reynolds, Cav.	50(9Vs)	Gold & Trophy	
4th—1st Lt. Stanley W. Trachta, USMC	50(8Vs)	Bronze	
5th—Sgt. Franklin D. Marcom, USMC	50(7Vs)	Bronze	
6th—2d Lt. William A. Stiles, USMC	50(7Vs)	Bronze	
10th—PlSgt. Bennie M. Bunn, USMC	50(7Vs)	Bronze	
CROWELL TROPHY—(1324 entries)—10 shots 600SF			
Won by 1st Lt. Edwin L. Hamilton, USMC	50(10Vs)	Gold & Trophy	
2nd—1st Lt. Walter R. Walsh, USMCR(O)	50(10Vs)	Silver	
7th—Corp. George W. Howe, USMC	50(8Vs)	Bronze	
10th—GySgt. Robert E. Schneeman, USMC	50(8Vs)	Bronze	
NAVY CUP—(1614 entries)—20 shots 200SF			
Won by GySgt. Claude N. Harris, USMC	98	Gold & Trophy	
6th—Corp. Fred H. Butcher, USMC	94	Bronze	
8th—GySgt. Robert E. Schneeman, USMC	94	Bronze	
9th—PlSgt. Edward V. Seeser, USMC	94	Bronze	
COAST GUARD TROPHY—(1502 entries)—10 shots 200RF			
Won by Sgt. William L. Jordan, USMC	50	Gold & Trophy	
2nd—Corp. Ralph C. Cox, USMC	50	Silver	
6th—Maj. Joseph F. Hankins, USMCR	50	Bronze	
7th—GySgt. Claude N. Harris, USMC	50	Bronze	
8th—Corp. Mark W. Billing, USMC	50	Bronze	
LEECH CUP—(1543 entries)—20 shots 1000SF, Service Rifle			
Won by 1st Lt. Bogardus S. Cairns, Cav.	100(15Vs)	Gold & Trophy	
8th—Maj. Joseph F. Hankins, USMCR	100(11Vs)	Bronze	
9th—1st Lt. Edwin L. Hamilton, USMC	100(10Vs)	Bronze	
10th—Sgt. Carl L. Propst, USMC	100(9Vs)	Bronze	
WIMBLEDON CUP—(1515 entries)—20 shots 1000SF, any rifle			
Won by 1st Lt. Edwin L. Hamilton, USMC	100(24Vs)	Gold & Trophy	
3rd—Corp. Normal L. Mitchell, USMC	100(18Vs)	Bronze	
4th—Capt. David S. McDougal, USMC	100(18Vs)	Bronze	
5th—PlSgt. Arthur A. Compton, USMC	100(18Vs)	Bronze	
9th—Capt. Samuel R. Shaw, USMC	100(16Vs)	Bronze	
10th—PlSgt. Raymond D. Chaney	100(16Vs)	Bronze	
MARINE CORPS CUP—(1560 entries)—10 shots each, 600SF & 1000SF			
Won by Mr. Fred Johansen, Civilian	100(12Vs)	Gold & Trophy	
7th—Sgt. Thomas R. Mitchell, USMC	99(11Vs)	Bronze	
CAMP PERRY INSTRUCTORS' TROPHY—(758 entries)—200 surprise fire, M-1 rifle			
Won by Mr. Arne O. Siedschlew, Civilian	74(6Vs)	Gold & Trophy	
4th—GySgt. John F. Jost, USMCR(O)	71(5Vs)	Bronze	
THE PRESIDENT'S MATCH—(1625 entries)—10 shots each, 200SF, 600SF, 1000SF			
Won by Corp. Thaddeus A. Ference, Infantry	146(11Vs)	Gold & Letter	
6th—Sgt. Donald R. Rusk, USMC	145(12Vs)	Bronze	
12 members of the Regular Marine Corps and 2 members of the Marine Corps Reserve placed in the "PRESIDENT'S HUNDRED"			
SCOTT TROPHY—(1465 entries)—10 shots 300RF			
Won by Sgt. Claude O. Foster, USMC	50	Gold & Trophy	
2nd—Corp. George W. Howe, USMC	50	Silver	

6th—PISgt. Victor F. Brown, USMC	50	Bronze
9th—Sgt. Valentine J. Kravitz, USMC	49	Bronze
10th—Sgt. William L. Jordan, Jr., USMC	49	Bronze
M-1 200 YARDS RAPID-FIRE—(1052 entries)		
Won by Mr. C. L. Swett, Civilian	80	Gold
2nd—Sgt. Steve Disco, USMC	78	Silver
7th—1st Lt. Douglas C. McDougal, Jr., USMC	77	Bronze
M-1 300 YARDS RAPID-FIRE—(1012 entries)		
Won by Corp. Carl W. Byas, Infantry	77	Gold
6th—Sgt. Hall Webber, USMCR	75	Bronze
HERRICK TROPHY TEAM MATCH—(87 entries)—8-man team, 20 shots each 1000SF		
Won by Marine Corps	797	Silver (10)
2nd—U. S. Coast Guard	793(111V)	Bronze (10)
3rd—U. S. Infantry	793(110V)	Bronze (10)
DUPONT TROPHY TEAM MATCH—(62 entries)—10-man team, 10 shots each, 600SF, M-1 rifle		
Won by Marine Corps Reserve	468	Silver
2nd—Marine Corps	467	Bronze
ENLISTED MEN TROPHY TEAM—(41 entries)—10-man team, 200SF, 200RF, 300RF		
Won by Infantry Team	1417	Silver (12)
2nd—Marine Corps Team	1416	Bronze (12)
A.E.F. ROUMANIAN TROPHY—(45 entries)—10-man team, 10 shots each, 600SF & 1000SF		
Won by Infantry Team	976	Silver (12)
5th—Marine Corps Team	936	None

PISTOL MATCHES

NRA CENTER-FIRE RAPID FIRE MATCH—(325 entries)—20 shots, 25 yards		
Won by P. M. Chapman, U. S. Treasury	196	Gold Medal
5th—1st Lt. Walter R. Walsh, USMCR	194	Silver Medal
NRA CENTER-FIRE TIMED-FIRE MATCH—(341 entries)—20 shots, 25 yards		
Won by Paul C. Spavor, St. Louis Police	199	Gold Medal
3rd—PISgt. Thurman E. Barrier, USMC	198	Silver Medal
CLARKE MEMORIAL TROPHY MATCH—(339 entries)—National Match Course		
Won by Arnuid Anderson, U. S. Treasury	287	Trophy & Gold Medal
5th—1st Lt. Noah J. Rodeheffer, USMC	281	Silver Medal
.45 CALIBER MILITARY SERVICE MATCH—(89 entries)—National Match Course		
Won by 1st Sgt. Hilbert O. Hildston, Infantry	278	Gold Medal
2nd—Sgt. Walter E. Fletcher, USMC	274	Silver Medal
3rd—PISgt. Thurman E. Barrier, USMC	274	Bronze Medal
.45 CALIBER SLOW FIRE MATCH—(287 entries)—20 shots, 50 yards		
Won by 1st Sgt. Huelet L. Benner, Infantry	183	Gold Medal
4th—MGun. James R. Tucker, USMC	180	Bronze Medal
7th—Sgt. Walter E. Fletcher, USMC	178	Bronze Medal
.45 CALIBER TIMED-FIRE MATCH—(286 entries)—20 shots, 25 yards		
Won by Harry W. Reeves, Detroit Police	197	Gold Medal
2nd—Sgt. Walter E. Fletcher, USMC	196	Silver Medal
3rd—MGun. James R. Tucker, USMC	195	Bronze Medal
.45 CALIBER RAPID-FIRE MATCH—(275 entries)—20 shots, 25 yards		
Won by Officer P. C. Spavor, St. Louis Police	196	Gold Medal
7th—MGun. James R. Tucker, USMC	191	Silver Medal
8th—Sgt. Walter E. Fletcher, USMC	191	Bronze Medal
10th—PISgt. Thurman E. Barrier, USMC	190	Bronze Medal
11th—1st Lt. Walter R. Walsh, USMCR(O)	189	Bronze Medal

ORTON MEMORIAL TROPHY MATCH—(304 entries)—National
Match Course

Won by Officer F. M. O'Connor, Kansas Police	288	Trophy & Gold Medal
8th—1st Lt. Walter R. Walsh, USMCR(O)	279	Bronze Medal
10th—MGun. James R. Tucker, USMC	277	Bronze Medal
11th—Sgt. Walter E. Fletcher, USMC	276	Bronze Medal
NRA ALL-ROUND MATCH—(135 entries)—An aggregate		
Won by Harry W. Reeves, Detroit Police	848	Gold Medal
7th—1st Lt. Walter R. Walsh, USMCR(O)	835	Bronze Medal

THE NATIONAL MATCHES

INFANTRY TEAM MATCH—(73 entries)—8-man team—A Musketry
Problem

Won by U. S. Coast Guard	560	Trophy & 8 Bronze Medals
9th—Marine Corps	513	8 Bronze Medals

PISTOL TEAM MATCH—(29 entries)—Gold Cup Trophy

	50 yds. S. F.	25 yds. T. F.	25 yds. R. F.	Total Score
Won by U. S. Infantry	417	464	462	1343 (Record)
2nd—U. S. Cavalry	416	461	456	1333
3rd—U. S. Coast Guard	408	468	454	1330
4th—U. S. Marine Corps				
MGun. James R. Tucker, Team Captain; 1st Lt. Noah J. Rodeheffer, Alternate				
PlSgt. Thurman E. Barrier	78	93	90	261
Sgt. Walter E. Fletcher	75	93	96	264
Sgt. Vito Perna	81	98	88	267
Sgt. John E. Heath	81	95	94	270
GySgt. Robert E. Schneeman	78	92	90	260
Team Total	393	471	458	1322
8th—Marine Corps Reserve	393	460	427	1280

INDIVIDUAL RIFLE—(1706 entries)—Daniel Boone Trophy

	Score	Medal
Won by Sgt. William J. Coffman, U. S. Infantry	289	Gold & Trophy
4th—PlSgt. Steve Disco, USMC*	287	Gold Bar
8th—Sgt. Thomas R. Mitchell, USMC	283	Gold Bar
10th—Sgt. Valentine J. Kravitz, USMC	283	Gold Bar
15th—1st Lt. Emmet O. Swanson, USMCR(O)	282	Gold Bar
18th—PlSgt. Harold J. Thomas, USMC	281	Gold
19th—Sgt. Charles R. Guilbeau, USMC	281	Gold
21st—PlSgt. Edward V. Seeser, USMC	281	Gold Bar
30th—1st Lt. Walter R. Walsh, USMCR(O)	279	Silver Bar
42nd—Pfc. Mangus D. Schone, USMC	277	Silver
44th—1st Lt. Robert D. Moser, USMC	277	Silver Bar
46th—PlSgt. Bennie M. Bunn, USMC	277	Silver Bar
47th—2nd Lt. William A. Stiles, USMC	277	Silver
48th—GySgt. Claude N. Harris, USMC	277	Silver Bar
49th—Sgt. Franklin D. Marcom, USMC	277	Silver
50th—Capt. Samuel R. Shaw, USMC	277	Silver Bar
56th—1st Lt. Edwin L. Hamilton, USMC	276	Silver Bar
57th—Sgt. William L. Jordan, Jr., USMC	276	Silver Bar
60th—Tech. Sgt. Arthur N. Larocque, USMC	275	Silver
65th—PlSgt. Leonard A. Oderman, USMC	275	Silver Bar
66th—PlSgt. Arthur A. Compton, USMC	275	Silver
69th—Corp. John J. Doyle, Jr., USMC	275	Silver
70th—Sgt. Carl L. Propst, USMC	275	Bronze Bar
72nd—Corp. Mark W. Billing, USMC	275	Bronze
75th—Capt. David S. McDougal, USMC	275	Bronze Bar
97th—Corp. George W. Howe, USMC	273	Bronze Bar
101st—PlSgt. Raymond D. Chaney, USMC	273	Bronze Bar
106th—MGySgt. Thomas J. Jones, USMC	273	Bronze Bar

*Awarded Coast Artillery Corps Cup—high Marine.

117th—Corp. George Kross, USMC	272	Bronze
122nd—PlSgt. Waldo A. Phinney, USMC	272	Bronze Bar
135th—MGun. Henry P. Crowe, USMC	271	Bronze Bar
141st—1st Sgt. Claud A. Mudd, USMC	271	Bronze Bar
142nd—Sgt. Lewis J. Camp, USMC	271	Bronze
151st—PlSgt. Victor F. Brown, USMC	271	Bronze Bar
152nd—1st Lt. James G. Frazer, USMC	271	Bronze Bar
162nd—Corp. John J. Grazioli, USMC	270	Bronze
164th—Pfc. Horace W. Card, Jr., USMCR(O)	270	Bronze
173rd—Pfc. John J. Ceraolo, USMC	270	Bronze
178th—Sgt. Henry B. Einstein, USMC	270	Bronze Bar
179th—Corp. Gerald M. Bolen, USMCR(O)	270	Bronze
INDIVIDUAL PISTOL—(575 entries)—General Custer Trophy		
Won by Joseph P. Corr, Philadelphia Police	277	Gold
11th—Sgt. Vito Perna, USMC	272	Gold Bar
15th—GySgt. Robert E. Schneeman, USMC	271	Gold Bar
20th—MGun. James R. Tucker, USMC	270	Gold Bar
26th—1st Lt. Henry J. Adams, Jr., USMCR(O)	269	Gold Bar
39th—1st Lt. Walter R. Walsh, USMCR(O)	266	Silver Bar
41st—PlSgt. Victor F. Brown, USMC	266	Silver Bar
47th—PlSgt. Thurman E. Barrier, USMC	265	Silver Bar
56th—1st Lt. Edwin L. Hamilton, USMC	264	Silver Bar
66th—PlSgt. Rames O. DeLaHunt	262	Silver
68th—GySgt. Salvatore J. Bartletti, USMCR(V)	262	Silver Bar
76th—Sgt. John E. Heath, USMC	261	Bronze Bar
81st—1st Lt. Noah J. Rodeheffer, USMC	261	Bronze Bar
82nd—1st Lt. James G. Frazer, USMC	261	Bronze
86th—Sgt. Carl Propst, USMC	260	Bronze
95th—1st Lt. Emmet O. Swanson, USMCR(O)	258	Bronze
102nd—PlSgt. Leonard A. Oderman, USMC	257	Bronze
108th—Corp. Mark W. Billing, USMC	256	Bronze
114th—1st Lt. Douglas C. McDougal, Jr., USMCR(O)	256	Bronze

NATIONAL RIFLE TEAM MATCHES

(98 entries)

Won by U. S. Marine Corps 2833

Major Morris L. Shively, Team Captain; Major Andrew J. Mathiesen, Team Coach; ChMGun. Calvin A. Lloyd, Asst. Team Coach. Alternates—PlSgt. Arthur A. Compton, PlSgt. Donald R. Rusk.

	200SF	200RF	300RF	600SF	1000SF	Total
Pfc. Mark W. Billing*	48	49	50	47	97	291
PltSgt. Edward V. Seeser	48	50	47	50	95	290
2nd Lt. William A. Stiles	47	49	47	47	91	281
PltSgt. Claude N. Harris	48	49	48	46	96	287
Pfc. Ralph C. Cox	46	50	45	47	91	279
Sgt. Thomas R. Mitchell	48	48	49	50	92	287
1st Lt. Glenn C. Funk	43	49	46	49	93	280
GySgt. Robert E. Schneeman	45	50	49	46	94	284
1st Lt. Edwin L. Hamilton	40	49	49	45	84	267
Capt. David S. McDougal	47	50	49	49	92	287
Team Total	460	493	479	476	925	2833

2nd—U. S. Infantry	2801
3rd—Marine Corps Reserve Team No. 1 (Rattlesnake Trophy)	2800
4th—Coast Guard	2782
5th—U. S. Cavalry	2741
6th—Montana Civilian	2740
7th—Colorado Civilian	2730
8th—Ohio National Guard	2729
9th—Marine Corps Reserve Team No. 2	2728

*Awarded Pershing Trophy for high individual.

CARDED

New Styles in Organization

BY COLONEL P. A. DEL VALLE AND MAJOR H. D. HARRIS, U.S.M.C.

PERHAPS one of the most fruitful ways of analyzing organizational requirements is to review briefly the lessons derived from recent wars and the various campaigns of the present war to date.

The Ethiopian war, which was filled with bloody and bitter fighting, was above all a triumph for motorization and engineering skill. Effective air support plus the splendid quality of American trucks enabled the Italian Army to bring a difficult campaign to an early and successful conclusion.

In Spain it was found that airplanes could effectively support attacking infantry who had outrun their artillery support; but that a few tanks thrown against an enemy who has an adequate supply of antitank guns and mines was a most unprofitable venture. It was shown that speed in a tank was not, in itself, an effective counter to antitank fire. The French concept of heavy armor rather than speed seemed to be correct.

The long siege of Madrid led many to conclude that future warfare would follow the concepts developed at the end of 1918. It was largely accepted in most of Europe that an organized defense with a highly developed and coordinated system of defensive fires could only be broken for a short distance and at the price of staggering losses.

Comparatively widespread was the use of aviation by both sides in Spain for attacking communication and industrial centers of the adversary. These attacks were relatively ineffective. This was due, however, rather to the small scale of operations than to their inherent efficacy as a method.

Europe in general, with the exception of Germany, drew some rather false conclusions from the war in Spain. The slow moving steam-roller operations of the concluding days of 1918 seemed still in vogue. The application of aircraft's tremendous potentialities on the battlefield and its immediate rear were missed by both France and England. It was mistakenly assumed that the moral effect of aircraft on the Spaniards would not apply to Frenchmen and Englishmen.

Antiaircraft guns were used in limited quantity only. While there was much discussion about the great effectiveness of the German antiaircraft guns and gunnery, it was accepted generally as being of rather academic interest than as a matter for practical application.

FINNISH-SOVIET WAR

Except for the constant use of aviation by the Russians, the Finnish war seemed to fall back into the pattern of the first World War where the slow moving steam-roller process was Queen.

Perhaps the most significant thing to be learned from the Finnish campaign was the fact that strongly fortified lines *could be taken*.

THE CAMPAIGNS OF THE PRESENT WAR:

(A) THE POLISH CAMPAIGN

1. The Polish defeat may be ascribed in part to the following factors:

1. Lack of sufficient aviation and antiaircraft forces to insure reasonable security to the rear areas and support on the field of battle.
2. Lack of roads and motor transportation to permit movement, supply and evacuation to supplement, and if necessary to replace the railroads.
3. Lack of mechanized forces to counter-attack.
4. Lack of antitank weapons in sufficient quantity in the lower echelons to neutralize *mass* tank attacks.
5. Lack of efficient signal communications for field operations as well as lack of proper indoctrination in authentication of orders.

On the German side of the ledger we find that they were successful largely because they:

1. Had overwhelming air superiority.
2. Had perfectly functioning combat intelligence, so that they always knew when and where to strike.
3. Had equipped their infantry units with the various weapons needed to do their jobs.
4. Used mechanized forces in mass.
5. Had a splendidly organized and equipped supply system that enabled combatant units to be supplied under the most adverse conditions where roads and railroads were practically non-existent.
6. Had efficient and reliable signal communications, so that the exercise of control was always possible.

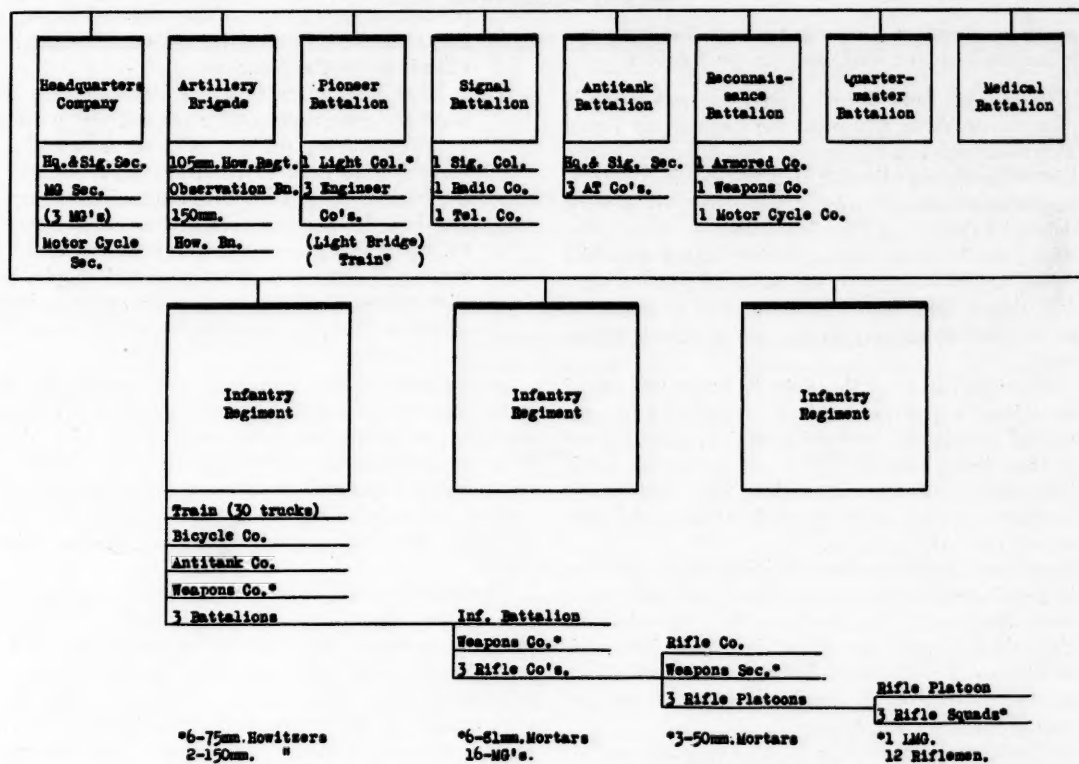
(B) NORWEGIAN CAMPAIGN

With great daring, careful planning, and an efficient Fifth Column, the Germans gained control of all principal ports and airfields. A badly disorganized, poorly trained, and poorly equipped Norwegian army attempted to halt the German columns radiating from Oslo. British and French forces were hastily gotten together and sent to aid the Norwegians. But the expeditionary force which had been gathered to send to Finland had been disbanded. The British were badly mauled by the Germans at Trondheim chiefly because they lacked the essential armament and organization.

German motorized and mechanized forces, supported by great aviation strength, had little difficulty in overcoming all resistance and soon became masters of all Norway except the Narvik area.

Again the Germans: by the striking power of their air force and mechanized units; by the mobility of their motorized units; and by the sustained hitting capacity of their well armed and organized infantry, were able to achieve a brilliant victory in a most difficult theater of operations.

A TYPICAL GERMAN DIVISION



(C) THE LOW COUNTRIES

In quick succession Holland and Belgium collapsed before the onslaught of the German Armies. Of the French and British forces that went to the rescue of the Low Countries, practically the entire lot were destroyed as an effective armed force. It is true that the British and French salvaged a great many men by the remarkable evacuation from Dunkirk, but the French Army lost its mechanized forces, and three Armies were entirely disrupted. The British lost practically all the equipment of a force of approximately 350,000 men.

(D) FRANCE

After this staggering blow to the Allies, the Germans moved promptly to remove the last traces of the French Army which constituted a threat to the German left flank. The Battle of France, following on the heels of the battle of Flanders was almost a repetition of this latter. It is true that the French held for a few days and fought valiantly, but they broke quickly and the Germans soon reached Paris. The French were unable to re-establish themselves and were forced to sue for peace in the famous Armistice Car in Compiegne Forest.

This sudden and astounding success of the Germans brings out forcibly the following points:

- (a) The efforts of the German Political and Military Intelligence machine had paved the way for the military effort and ably seconded this effort. False

rumors, false orders and confusion which sorely beset the French, were meticulously organized in advance and masterfully executed.

- (b) The attacks on the fortified Maginot Line and on the Dutch and Belgian fortifications were successful due to the establishment of specially trained troops for this purpose. These troops, like combat engineers, were an organic part of the assaulting divisions.
- (c) German field artillery and air support were exceptionally powerful and effective. These were closely coordinated with tanks and infantry to break through the French lines.
- (d) Units as small as the regiment had adequate fire power under the immediate control of their commanders, so that de-centralization and speed became possible.
- (e) Coordination of all arms, simplified orders, and rapid communications enabled the Germans to maintain their headlong pace.
- (f) Supply and evacuation was carefully organized and functioned without any major disruption.
- (g) Use of great coordinated masses of tanks, planes, artillery and infantry is essential to success.
- (h) Constant aggression and disregard for losses must be instilled in all echelons in order to successfully execute offensive operations.
- (i) Initiative and daring is essential in subordinate leaders.

- (j) Effective control by means of air observation and radio communication enabled higher commanders to function properly.

ANALYSIS OF FRENCH FAILURE IN THE BATTLE OF FLANDERS, AND IN THE BATTLE OF FRANCE

- (a) The French (and British) air force was numerically too weak to cope with the German air force.
- (b) French troops had not been trained to fire at hostile low flying planes. Passive resistance seriously hampered movement of troops and exercised a very deleterious effect on French morale.
- (c) The French Army was so indoctrinated with the defensive spirit and with the tactics of position warfare that it was unable to adapt itself to a war of movement, where aggressive action was a necessity.
- (d) The organization of the French Army was based on defensive, position warfare. Battalion and regimental commanders did not have the requisite arms at their immediate disposal to engage in the semi-independent operations into which they were forced. Artillery support could normally be obtained only by call upon the Division.
- (e) Battalions, regiments and divisions were deficient in antiaircraft weapons as well as in antitank weapons. Antiaircraft machine guns (of approximately .50 caliber) were introduced into first line regiments only a few months before the war broke out, so that training in the employment of this weapon was probably deficient.

The French antitank guns were excellent against lightly armored vehicles, but as the French must have learned in Spain, these guns could not cope with tanks having heavy armor. Nevertheless the French Army started the war with 25-mm antitank guns. Production of the 47-mm antitank gun never attained sufficient quantity to affect materially the outcome of the campaign.

- (f) The French placed too much reliance on their railroads. These rail lines were extremely vulnerable to air attack and their disruption contributed greatly to the failure of the French military machine.
- (g) The French Army was only slightly motorized, and was unable to move enough force by motors to sway the results of battle.
- (h) The French doctrine of tank employment did not envisage the employment of tanks on such a massive scale as the Germans. The French tanks were not afforded proper antiaircraft protection on the road. Neither did the French employ their tanks to best advantage in counter-attacking. Judging from reports these tanks were never thrown into battle in sufficient numbers to have any decisive effect.
- (i) The French placed too much reliance upon the existing civil telephone and telegraph network. Destruction of this network by the German air force, by parachute troops, fast motorized forces that had followed a breakthrough, (not to mention the activities of Fifth Columnists) all served to disrupt communications. Thus command and intelligence

functions were crippled almost to the point of uselessness in some sectors.

- (j) The French did not seem to have had a proper procedure for verifying the authenticity of messages received, hence false orders were used most effectively by the Germans.

Thus interwoven into the lessons of the recent wars and campaigns of the present war we see the requirements for success. Proper arms and equipment for the task in hand are very essential and are closely entwined with the question of organization in order that a proper balance may be obtained. Of equal importance with organization and equipment is the question of training and supply, but as this article concerns itself with organization, the question of supply and training will be treated only incidentally.

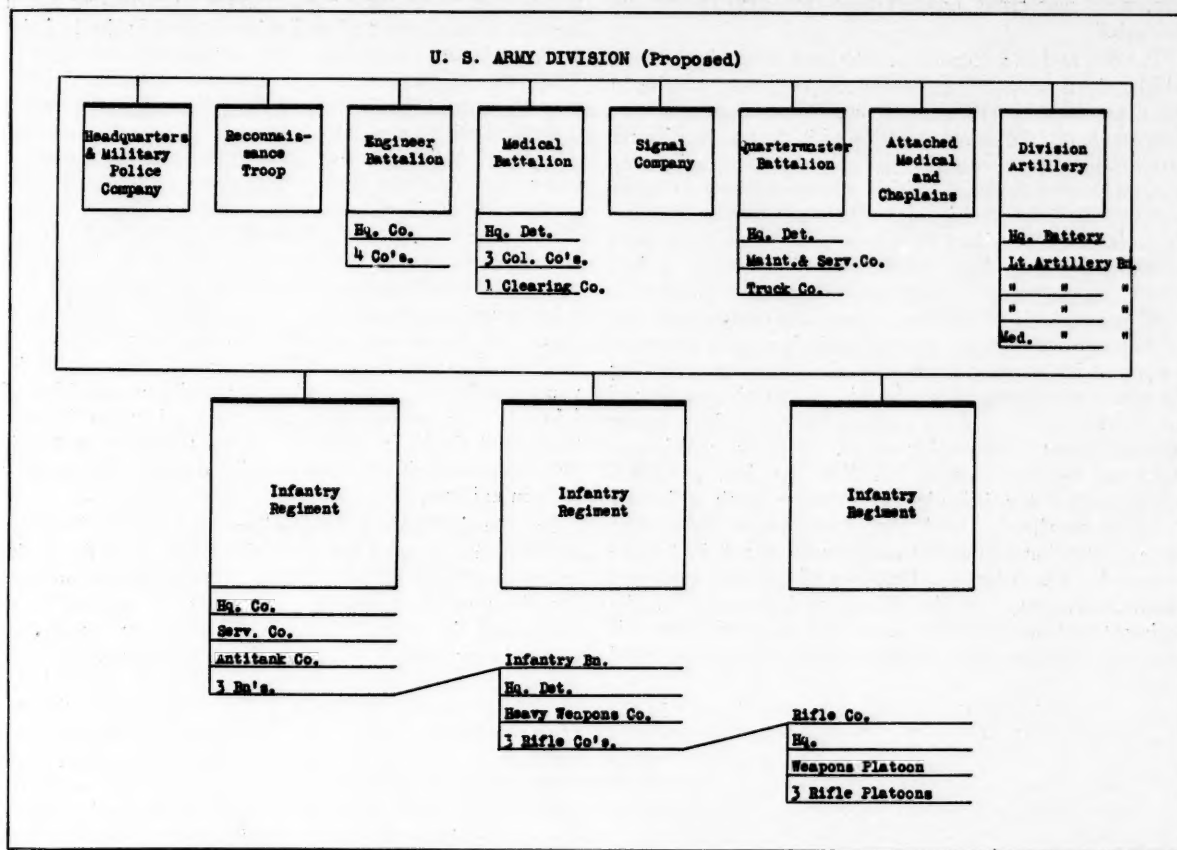
In the light of this abundant war experience all the great powers are making changes in their organization, transport, armament and equipment. In the United States the new triangular division replaces the former rectangular, two brigade, organization. Fire power is considerably increased by supplanting 75-mm guns with the 105-mm howitzers, their high angle fire replacing the flat trajectory guns.

The typical German division contains features strikingly new, such as the "Reconnaissance Battalion." French and British experience led to providing antiaircraft and antitank defense to all echelons including the platoon. The problem of ammunition supply on the field of battle was very neatly solved by the little French armored vehicle with trailer called the "Chenillette." The Swiss, Germans, Italians and French all have a platoon of three "groups" or squads, which like our new army squad consists of about 12 men. The Russians have a four squad platoon, the fourth being composed entirely of rifle grenadiers.

Mostly, the new squads are the embodiment of our old, old principles of "Fire and Movement." They are made up of a "fire" group, which has an automatic weapon, plus a "movement" group of mobile rifle and bayonet men to close with the enemy under cover of the fire of the other group. In our own Army fire and movement appear to be condensed into one element due to the increased firepower of the M-1 rifle with which all members of the squad are armed, leaving them *all* mobile.

An interesting development is the new appreciation of the value of well-aimed rifle fire. The Finns demonstrated to the satisfaction of all observers that the ability of the individual soldier to employ aimed and accurate fire is of great value. All hands have been quickly, if quietly, divesting themselves of the mistaken conception that a rifle is but an instrument upon which to hang a bayonet. We of the Marine Corps have never succumbed to this fallacy, and can point with pride to the fact that the basic infantry training of every marine requires him to be a good marksman.

Against the older conceptions of organization, equipment and armament the technique of modern war has impinged with varying results. Change, that inevitable law of life itself, has touched our Corps like it has everything else. We must accept it therefor and avoiding rigidity and in-



ertia, be receptive to the new. But before embracing enthusiastically every new idea blown our way by the troubled winds of the present world storms, let us take counsel with ourselves and see if it is possible to distill from the mass of information available the permanent and substantial, casting off the ephemeral. We desire after all:

- (a) To retain that portion of the "old" which is still sound.
- (b) To add such of the "new" as seems sensible, practical, and provenly advantageous.
- (c) To discard from the "old" that which is no longer suitable. (The bow-and-arrow conceptions.)
- (d) To discard from the "new" the palpably impractical and fantastic. (The "Buck Rogers Disintegrator Gun" ideas.)

With this end in view, therefor, let us set down what we believe are the basic trends of sound change.

Foremost among these appears to be the principle of flexibility in organization, i.e., you set up a general type of division, for instance, but you do not necessarily stick to it blindly. You add or subtract, alter its personnel, its transport and its armament as dictated by the requirements of the particular task for which intended. This conforms to naval practice in forming task forces, and runs counter to the old custom of having a fixed organization for every task. The Italians formed task forces with their units in Ethiopia and in Spain. The Germans are constantly employing the same principle.

Secondly, there is an offensive spirit evinced in the revival of true "shock action." In the employment of large masses of tanks, (with aviation, motorized infantry, and artillery in close support) as a fast-moving, hard hitting, striking force, we have something in the nature of the old cavalry tactics of Napoleon's time. The difference, is more one of technique than of tactics. It appears to be the solution of the stalemate, hammer-and-tongs, sort of tactical muddle into which we drifted during the last war. It was Britain who produced the tank and launched it to a near-success during that struggle. Strangely enough, the Germans have been the ones who continued the technical and tactical developments leading to its present employment. We see in the typical German division a Reconnaissance Battalion which contrives to fulfill the old cavalry functions of the security and information attuned to meet the new time and space factors of modern warfare, and at the same time provides a modicum of fast-hitting power which gives to the division a capacity for shock action far beyond the capabilities of the "tank company plus foot soldier" team which emerged from the last war. Of course the full power of the shock tactic is exerted by the organizations known as armored divisions (Panzer) which the Germans have employed in overwhelming numbers, but this extends beyond the powers and scope of the Marine Corps, and so we limit ourselves to the study of the type divisions. The set-up includes armored vehicles and motorcycle troops to provide them with security and informa-

tion, and motorized infantry and artillery to "follow through."

Thirdly, and as a corollary to the armored striking force which, aided by aviation, besets the defender, (be he in the open or behind "Maginot lines") we discern a tendency to equip the lower echelons with the means of combating tanks and aviation. From the .55 caliber shoulder weapon employed in the British infantry platoon for anti-tank work to the divisional weapons (which in the last days of France consisted of 75mms) every echelon is tank conscious and must have some means of protection against them. Similarly antiaircraft weapons are distributed generally throughout all echelons. Even .30 caliber weapons are better than nothing. A foot-soldier's morale gets very low if he is harassed by enemy aircraft without having the means of fighting back. In this respect, the training of our riflemen and machine gunners to use their weapons against aircraft is thoroughly sound. Until our antiaircraft regiments became defense battalion, we had a where-withal within the brigades to interfere with a hostile "ruckus" overhead. With the separation of these units came a situation of general helplessness which had to be remedied. The Weapons Battalion of the new proposed Marine Division, and the Weapons Companies of the regiment and battalion are an attempt to provide for this need in accordance with (what we believe is the) accepted practice.

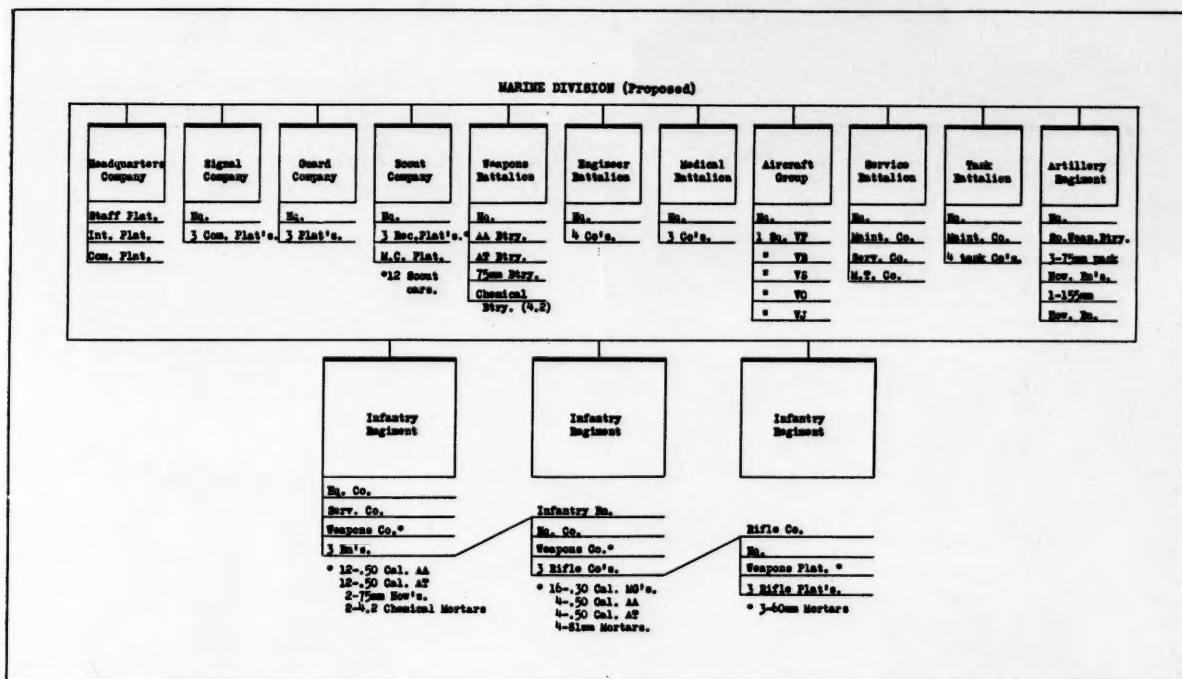
But in addition to this purely defensive element in the new armament, there is a thrusting forward into the front line units of artillery pieces of formidable caliber. Thus we see the German infantry battalion with six 81mm mortars, the regiment with six 75mm howitzers, and two 150mm howitzers. Even the company has machine guns and 50mm mortars at the disposal of the company commander for fire power to support his movement independently of the higher echelons. Back in 1936, after the grand army maneuvers, the Italians began to stress the necessity for the closest teamwork of infantry and artillery, and the experience of the wars since that time have proven them right. If we try to analyze the significance of this tendency, we may arrive at the conclusion that it is, after all, the principle of fire and movement applied in a bolder way than has hitherto been thought practicable. Just as the squad has its fire base and its movement group, so then has the company, and the battalion, and the regiment. But the fire base of these echelons today is definitely "bigger and better," and the commander of every unit now has the means of independent action commensurate with the capabilities of his echelon in the modern battlefield. If the company commander finds that the supporting weapons of his battalion are not available, he has with him the offensive fire power of mortars to support his mobile elements until the battalion weapons can come into action. Thus initiative and independence are made possible.

Ever present in the mind of the commander must be the logistic considerations which inevitably limit his effort. In the era before the railway, the modest supply problems were solved with the animal-drawn cart. Thus we read of Braddock complaining to Washington (before the ill-fated expedition into French and Indian country) of the quantity and quality of the carts procured. With the advent of the railway it was natural to employ it to the extent that

it lent itself to military purposes, and even to this day it persists as an element of major importance in the logistics of large bodies of troops. But the Italian campaign in Ethiopia, and the German campaigns in Poland and Flanders have been revelations of the potentialities of motor transport, with or without railways. Conversely did the French failure to motorize enough, and their too great reliance upon railways, lead to fatal disruptions. From this we derive that the employment of motor transport to supplement the railway has as general an application in war as it undoubtedly has in the commercial life of the country in peace; and constitutes as radical a dislocation of the established practices. In this we are exceptionally well situated, as we are the nation that produces and uses the greatest amount of motor transport in the world. Where is the youngster in this country who cannot drive some kind of jalopy? The average European peasant boy, on the contrary, still thinks in terms of animal transport, and it is necessary to teach him how to drive a motor vehicle after he is in uniform.

But the significance of this wider employment of motorization in the organization of Marine Corps units lies in the added facilities it gives us in the peculiar type of warfare for which we are organized. The hold of a transport being finite, and the radius of action on shore for amphibious troops being limited, we are inclined to steer shy of providing too much motor transport. That is sound judgment, and we lose nothing by being reasonable in this respect. However, there is another side to the picture. The problem must be attacked also from the all-important angle of the objective. What is it we are expected to accomplish? Are we to attack and subdue some semi-civilized, ill-equipped irregulars within ship's gunfire range? Then by all means let us not cram our transports with useless gear, but take only the minimum combat trains to feed us, water us, and provide us with a little ammunition; take no heavy cannon, just a few 75mm howitzers to scare them away. We have, in the past, done precisely this. And we may, in the future, be fortunate enough to be faced with just this simple task. But the fact that, when the Special Service Squadron arrived in Havana in 1933, there were present among the potential opponents some armored vehicles, some chemicals, and several other new toys with unpleasant connotations, leads one to suspect that it may be very different, in the future, from the good old days, even when the mission is limited.

But what about the seizure of a locality occupied by highly trained, well equipped troops? We cannot always hope that the places which must be acquired for the fleet will be poorly defended, nor that the operation will be circumscribed by the range of the ships' guns. Consequently we must not be niggardly in the supply of transport for our organization. We must set it up as it may be needed for the hardest task which we can conceivably be required to perform. It is always easier to cut down motor transport if the occasion requires, than it is to procure it suddenly. We get precious little comfort out of riding trucks that are "on order," if we have to rush troops out to an "El Tejar" which is farther from the beach than was the one outside Vera Cruz in 1914. For the service of security and information, for dealing a hard, fast, decisive blow and following it up, for keeping troops along a wide



front supplied with water, ammunition, and food during action; to haul the new and heavy loads of war and leave the men relatively free and mobile; in fact, to operate in any but the most elementary and archaic fashion, we must provide transport in our organization and ships must provide space accordingly.

By far the most striking lesson of the present war seems to lie in the support given to the foot troops by the air arm. Here the early establishment of superiority by the Germans gave aid and comfort to their own ground troops, laid waste enemy installations, and played havoc with enemy troops and vehicles. The fullest use was made of this factor to wring quick victories from such stout armies as those of Poland, Belgium, France, Holland and England. Not only was there the most perfect teamwork between the air and ground forces, but they merged in the employment of air and parachute troops. Aviation provided information, liaison, fire support of the closest sort, even food, water and ammunition, as well as transportation of the greatest speed. The foot soldier could put his mind squarely upon the problems presented by the enemy on the ground, for he knew that all was well in the sky above him. Discarding the dogma which had been derived from previous limited experience with this arm and had led us to circumscribe its functions, the Germans put aviation to the test, and are still doing so. How shall we order our own house so as to benefit by this experience? The new proposed division has been allotted an aviation group. This is due to the fact that no more is available at present. The minimum required would appear to be a mixed wing of two groups. But this is not all. The Fleet Marine Force itself should possess more aviation, which it could place at the disposal of the striking force to be employed. It may

sound like an exaggeration, but there appears to be a need for as much aviation as you can get in any given situation. Air superiority, like fire superiority, is a *sine qua non* of success in war. No doubt the coming months will provide the essential men and material for our improved and augmented air arm. We should learn all we can from the foreign powers and apply it to our strategy, our tactics, and our organization. But we should never forget that this nation produced the Wrights. With their spirit of inventiveness, let us ever explore new fields and possibilities for aviation in all branches of the military art, for the end is not yet in sight.

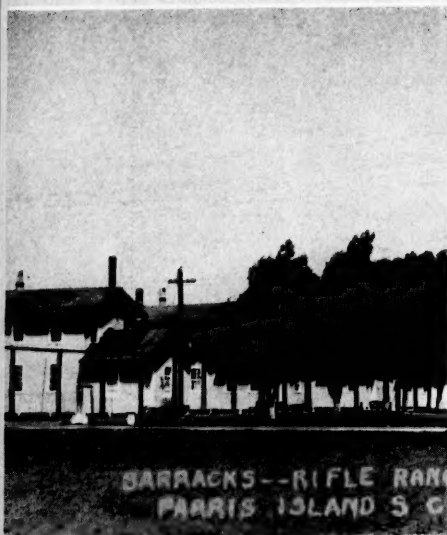
No greater truth was ever spoken than the "bon mot" that went around among the wits of a certain great nation to the effect that their general staff was always one war behind. It follows naturally from too intense a study of the past in a spirit of seeking dogma rather than eternal principles. But, on the other hand, it is quite impossible to spring into an unknown future without the solid ground of sound experience under your feet. Around the principles derived from past experience, but with the possibilities of the future always in view, can be built up an acceptable organization which will stand us in good stead when the need arises. But the guiding principle underlying such an organization must be the eternal one of mutability.

In the proposed division presented in this article this principle is the key note. Naturally it is upsetting to those who present to the budget authorities the requirements of the Fleet Marine Force to introduce changes. One can hear loud curses and good old regulation soldier's growls all along the line. But the alleged rigidity of the trajectory (in vacuo) simply will not apply to organization, arma-

(Continued on page 47)



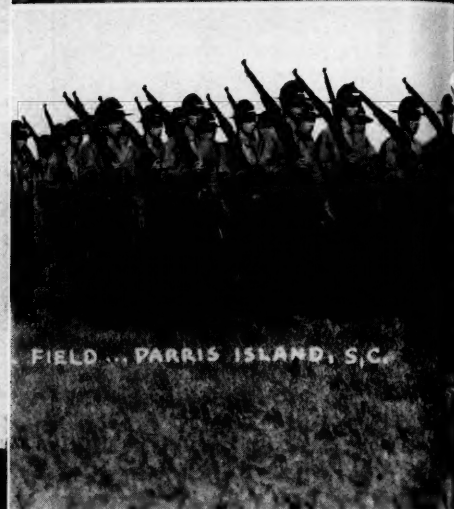
POST INN & WORLD WAR MEMORIAL
PARRIS ISLAND S C



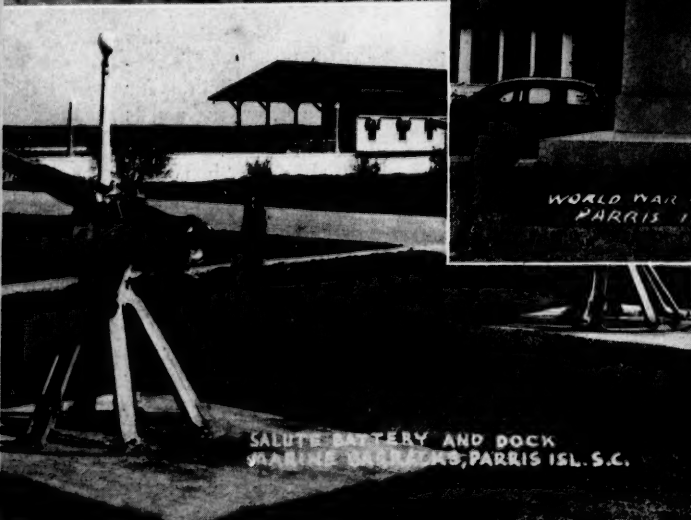
BARRACKS--RIFLE RANGE
PARRIS ISLAND S C



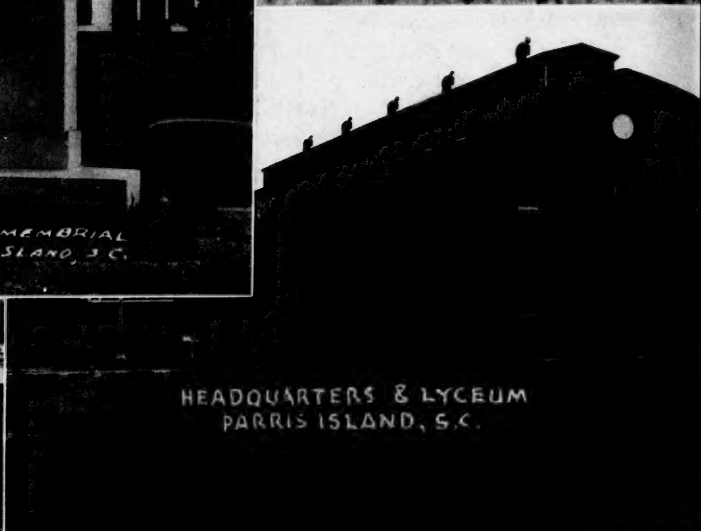
WORLD WAR MEMORIAL
PARRIS ISLAND, S.C.



FIELD ... PARRIS ISLAND, S.C.



SALUTE BATTERY AND DOCK
MARINE BARRACKS, PARRIS ISL. S.C.



HEADQUARTERS & LYCEUM
PARRIS ISLAND, S.C.



Marine Barracks, Parris Island

Before—

and After the Hurricane



Post Headquarters, looking west, and showing Artillery Lighter washed ashore, and general debris of storm



Artillery Lighter lying on Nicaragua Street next to the Administration Building



Nothing in particular—just scenery



Garage Area

The Big Wind at Parris Island

BY SECOND LIEUTENANT R. D. HEINL, JR., U.S.M.C.

PARRIS ISLAND Marines may never attain fame as meteorologists, but they know about hurricanes. Having ridden out an eighty-knot Carolina gale, having subsisted itself for virtually three days thereafter, and being now engaged in putting the pieces together again, the post of Parris Island has a well-grounded practical knowledge of the subject.

On Sunday morning, 11 August, with a gusty wind sweeping rain along the streets, at least one officer observed that "it looked like the tail end of a hurricane." Within forty minutes all hands had been warned to stand by not for any tail end of a spent windstorm, but for the real thing—and within three hours. Late risers found power shut off and telephone-lines barely open. A few provident or experienced persons had already furled awnings and filled bathtubs with fresh-water. Their precautions were well taken.

By 1100, rising wind and intensified rain had begun to interrupt communications, although measures taken to secure the post had been as well completed as time allowed. Boats were moored in the old drydock, memory of Parris Island's days as a naval station, but now a wet slip. The Navy diesel-tug was sent across the sound to Port Royal, and barges were secured doubly and trebly to their moorings. With electric power gone, quarters dependent upon electric stoves faced a cold Sunday dinner, but in several instances occupants bethought themselves of adjacent messes of the Main Station or the Fourth Defense Battalion, and hot food and coffee triumphed over hurricane.

All frame structures began to react to wind and rain. Occupants at first investigated slamming, banging and tearing noises amid the wind. Later they grew used to the sensation of seeing a screen-door tear loose, swing violently by a hinge for a few moments, and then loft away through the tree-tops. Roofing-paper and shingles were the blow's first prey, as were unfurled awnings, most of which were gradually reduced to ribbons which gave waterfront-quarters a bearded expression for days after. Ventilators and sheet-metal roofing carried away later: it struck observers as providential that no one was decapitated by the whirling sheets of jagged copper from the roof of the Post Lyceum. Just as sand filters in during a dust-storm, so water began to spurt between crevices in tightly-closed doors, or appear trickling down interior walls.

With the afternoon wind rising and the rain beginning to cut like driven hail, evacuation ceased to be a speculation and became a necessity. Recruits had already abandoned tent-camps at the Rifle Range and East Wing, and were being assembled in the nearest brick buildings, either the new Main Station or Rifle Range barracks, each of which was destined to become an island of refuge not only from



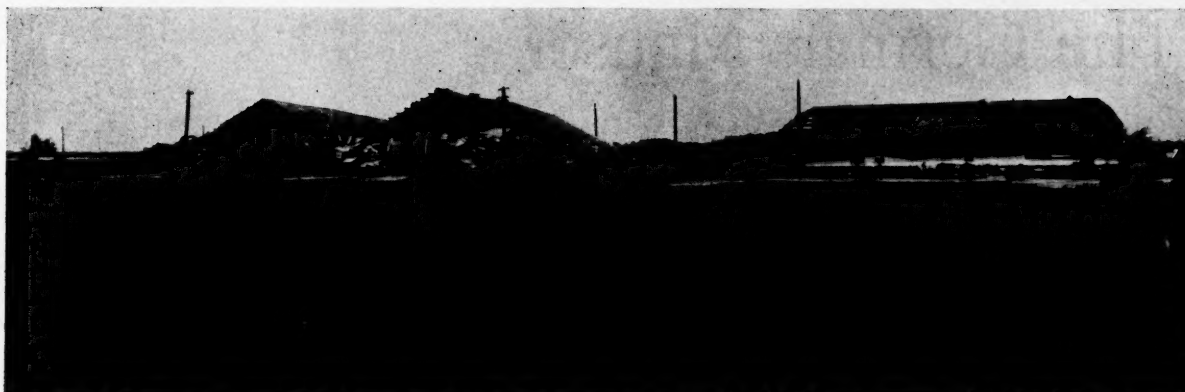
Water flooding out the Naval Hospital

wind and rain but from the tide. The East Wing barracks, survivors of the World War and "the old Marine Corps," groaned, swayed and creaked. One building finally surrendered, squatting sideways like an animal lying down; another simply took and held about fifteen degrees of list to leeward. The cavernous tin motor-transport sheds and compound on the Main Station were the next casualty. Their complete collapse was only prevented by the interposition of Post transportation between rooftop and flooring (most of the trucks, when excavated, still ran). The boats and Post Dock were given up for lost when the shed over the dock and seamen's barracks was unroofed and the general's barge (a crashboat used for emergency-trips to Hilton Head as well) sunk at its moorings. Rumors, happily unfounded, reported even the diesel-tug stove in and sunk. The barges, although tautly moored, were at the mercy of wind and rising tide. It was now after 1430, and the thought of high water had begun to excite apprehension.

Few persons who have been at the centre of a storm forget the experience. At approximately 1500, after intense and continuous gusts, the wind slackened, despite persisting rain. A few individuals not appreciative of the situation ventured abroad in the surprising lull; others, all too well aware, went out from curiosity, or to take stock and effect such damage-control measures as might serve. In a few moments, all were driven to shelter by terrific buffets from a wind which had hauled around. During the next two hours, the worst of the hurricanes was to beset the Island.

Bad as were succeeding winds, the tide was worse.

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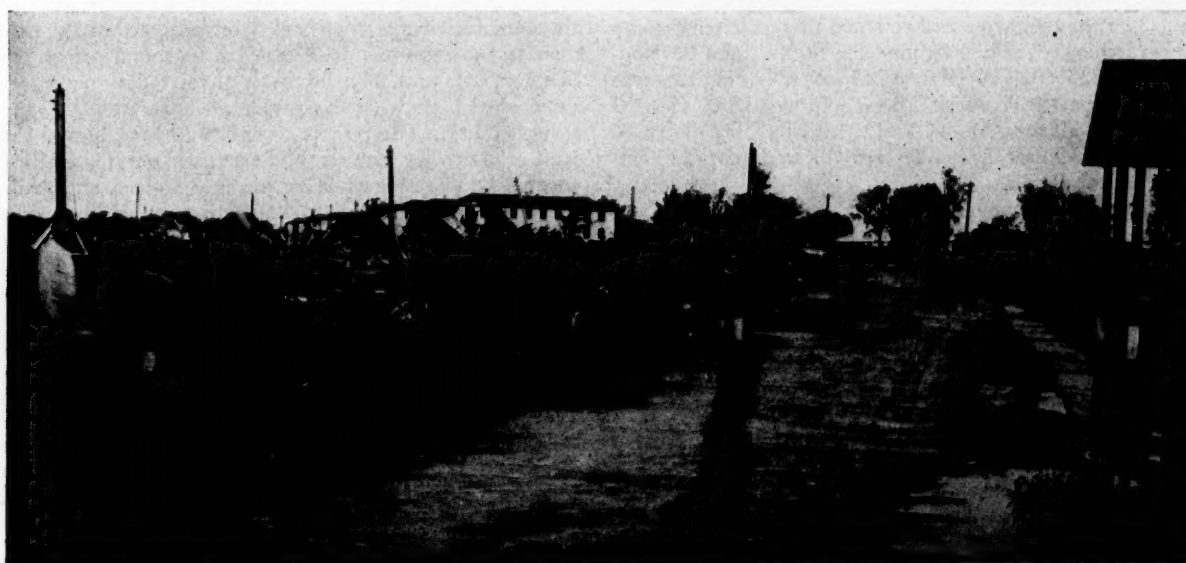
Old Seaplane Hangars, Parris Island, S. C., August 13, 1940



Typical scene on the Causeway—Beaufort side—very dangerous



Collapsed Barracks Buildings



General view of the Station after the flood

The German Mauser

By W. J. LANDEN

(Courtesy *The American Rifleman*, issue Sept. 1940)

IF all the center fire rifles in the world were counted and cataloged, more than half of them would trace their ancestry to the original German Mauser design. This is true of both sporting and military types, for no other rifle in the history of firearms has ever received such universal acceptance and performed so nobly as has this simple, rugged, almost fool-proof Mauser design. The invention of Paul Mauser, a German, in 1871, its superior features were quickly recognized and it soon outstripped its competitors for popularity in the high powered military rifle field. While not the first bolt action gun, it was, and still is, the best.

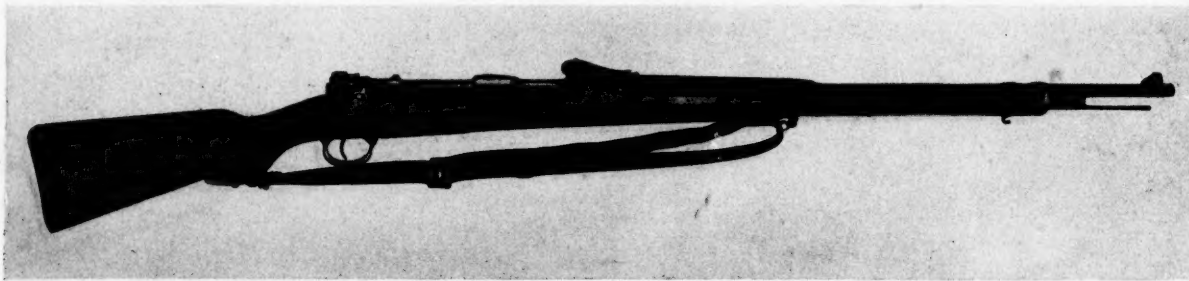
The Mauser rifle of today, with the exception of the "clip charger," is essentially the same as it was in 1871. When first adopted by the German Army in 1884, the rifle was chambered for the 11-mm. (.43 caliber) cartridge, which had a rimmed head case and fired a lead bullet at low velocity. Shortly thereafter, due partially to France's adoption of the 8-mm. Lebel and the adoption of the Mannlicher by Austria, the caliber was reduced to 7.9-mm. and a new method of charging was introduced. The new method of charging permitted the insertion of a charger containing five cartridges into the magazine, either side up, and feeding the cartridges one at a time from the charger to the chamber by operating the bolt. While this method was a decided improvement, it was not until a year later (1889) that the loading problem was finally solved to complete satisfaction. This was accomplished by means of a clip which held five cartridges so arranged that they could be stripped from the clip into the magazine and retained therein after the clip was discharged. The first model to use this new development was the Belgian Mauser, Model 1889, and this was followed by the Turkish Mauser, Model 1890, and the Argentine Mauser, Model 1891. All of these rifles used the basic Mauser principle and differed only in non-mechanical details.

Some minor changes and a few refinements have been made since 1889, but the basic mechanical principle re-

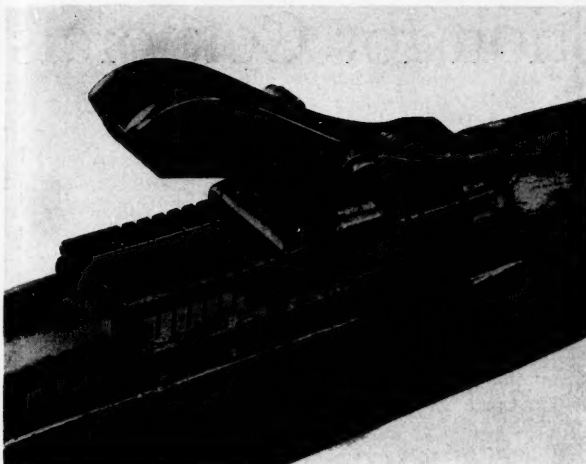
mains the same. The outstanding characteristics of the Mauser rifle are simplicity, strength, and ease of manufacture. Its easy opening bolt, straight line feed, positive ejection, and simple trigger and sear mechanism class it as one of the simplest of all center fire rifles. Its strength is attested to by the long years of service which it gives under the severe strain of military cartridges developing chamber pressures up to 50,000 pounds per square inch. The almost unbelievable quantities of Mauser rifles manufactured during the World War, 1914-1918, give some indication of the ease of manufacture.

The nearest American counterparts of the Mauser rifle are the Springfield, M1903, and the Winchester Models 54 and 70. Of these the Springfield is the best known; and, from 1903 until the introduction of the U. S. Rifle, Caliber .30, M1 (Garand) in 1936, it was the standard shoulder rifle of all our armed forces.

A hasty comparison of the Springfield M1903 and the Mauser may serve to provide a better knowledge of the latter. The bolt of the Springfield is the same diameter throughout its length while the Mauser bolt is somewhat larger at the rear; this tends to lessen the objectionable habit of the Mauser bolt of sticking or jamming during rapid fire, as it reduces the permissible misalignment when the bolt is open. The bolt handle of the Springfield is bent to place the knob in a more desirable position for opening. On the Mauser, the cocking cam angle is longer than on the Springfield, and gives a better feel during opening; which feature is particularly advantageous in rapid fire with a hot gun. The locking lugs on the Mauser are set somewhat farther back from the face of the bolt than on the Springfield. I know of no sound reason for this, and it is probably the result of some designer's personal ideas. Both types provide adequate strength and serviceability. The reserve or safety locking lug on the Mauser is smaller than on the Springfield yet it is entirely adequate. The Mauser firing pin is one piece, and while this necessitates replacing the entire rod if the point breaks, the number of such breakages hardly justifies the



The German Military Mauser rifle, 7.9-mm. caliber. There is little if any difference between this rifle and the one used by Germany in the War of 1914-18



Rear sight of the German Military rifle. The two sets of graduations are for different weights of bullets

additional cost involved in the manufacture of the two-piece rod and striker of the Springfield, in addition to which the cushioning effect of the play or tolerance in the fit of the striker and firing pin rod does not improve ignition in the Springfield. Other minor differences exist in the ejector, safety lock, sleeve lock and sear mechanism. The superiority of one rifle over the other as regards these features is questionable, and not wishing to be the defender in too many discussions, I will not attempt to pass judgment. Suffice to say that both have their advantages and disadvantages, and both give satisfactory service.

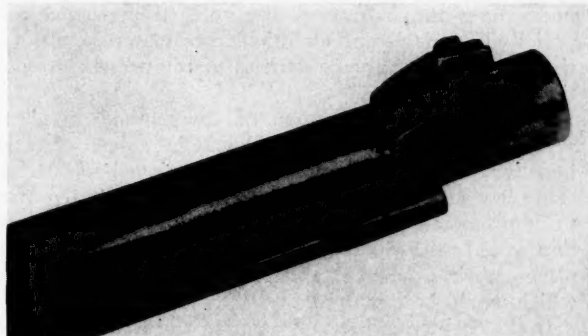
Today there are nineteen countries whose armies use rifles bearing the Mauser name, and two who use the same design under other names. The Springfield M1903 is a Mauser in everything but name, as is the Japanese "Arisaka." Germany, of course, uses the 7.9-mm. Model 1898; Czechoslovakia the same as Germany except for exterior details; Sweden the 6.5-mm. Model 1906; Luxembourg the 6.5-mm. Model 1896; Brazil and Chile the 7-mm. Model 1904; and China the 7-mm. Model 1893. Mexico, Colombia and Honduras use the 7-mm. Model 1902; Spain the 7-mm. Model 1896; Uruguay the 7-mm. Model 1908; Yugoslavia the 7-mm. Model 1899; and Bel-

gium and Argentina the 7.65-mm. Model 1891. Ecuador and Peru still stick to the 7.65-mm. Model 1891; Turkey uses the 7.65-mm. Model 1905; and Portugal the 6.5-mm. Mauser-Vergueiro Model 1904.

Nearly every country using the Mauser rifle has its own cartridge, and while the caliber may be the same as that of one or more other countries, the cartridges are seldom interchangeable. And, incidentally, if you have a Mauser rifle be sure that the cartridges you use in it are those which are intended for it. To do otherwise is to invite serious trouble.

MAUSER SPORTING RIFLES

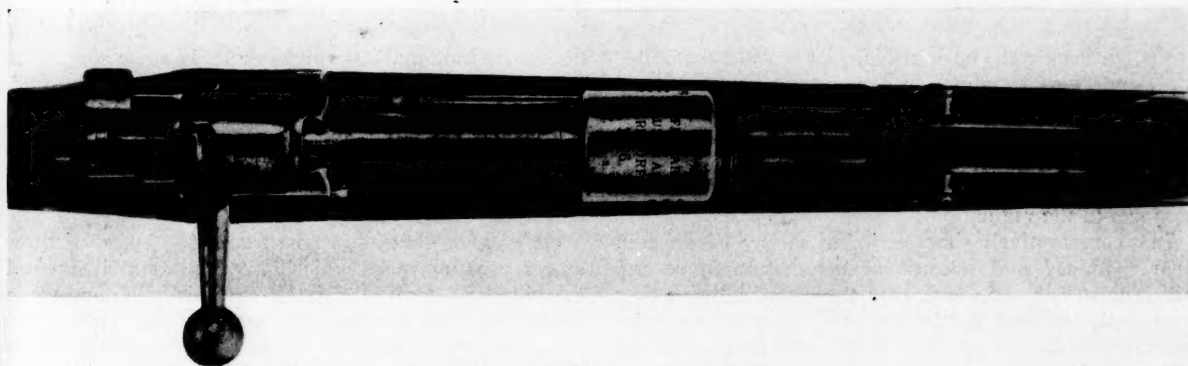
Contrary to American practice, Mauser rifles are made by innumerable manufacturers throughout Europe, particularly Germany. The large factories such as Waffenfabrik Mauser, Simson & Co., and Heinrich Krieghoff, turn out sound, well finished weapons. Many of the smaller and less known manufacturers are not over scrupulous. The American purchaser of a Mauser sporting rifle will therefore do well to make sure of the origin



Front sight of the German Mauser

of the gun he buys if he expects to have a smooth action and fine accuracy for which the design is famous. One of the best ways of being sure of what you get is to buy it from an American dealer whom you have confidence in. He knows which makes are good and will be glad to answer your questions. And don't expect to buy a really

(Continued on page 46)



Top view of breech action and rear sight of the German Military rifle

Standardized Promotion for Corporals and Sergeants

BY CAPTAIN JOHN S. LETCHER, U.S.M.C.

S O often have we heard the remark "the non-commissioned officers are the backbone of an organization" that we accept it as axiomatic. We recognize that few things are more important in any military organization than the non-commissioned officers. Yet it seems to me that our present method of selecting enlisted men for promotion to the rank of corporal and sergeant leaves much to be desired. Men are promoted to these ranks under a system which is varied and indefinite and two conditions result which are highly injurious to the Marine Corps. First, inefficient and unfitted men become non-commissioned officers and lower the efficiency of the Marine Corps. Second, promotion of such men undermines the morale of the enlisted personnel, especially of capable and ambitious men who miss promotion because of the irregularities of the present promotion system.

By proper standardization of the methods used to select men for promotion we should be able to greatly improve the quality of our non-commissioned officers because it would become very difficult for an unfitted man to be promoted. Also a standardized system of promotion would raise the morale of all enlisted personnel by placing their promotion upon a definite and fixed basis which would be fair to all.

In the chapter entitled "Promotion and Reduction" the Marine Corps Manual in Articles 6-24(7,8) sets forth the regulations governing the promotion of privates first class, corporals and sergeants of the line. These articles are as follows:

Article 6-24(7,8)

- (7) Scope of examinations:—Examinations for promotion shall be oral and practical except where otherwise prescribed. . . .
- (8) Privates first class, corporals, sergeants and platoon sergeants—Candidates for promotion to private first class, corporal, sergeant, and platoon sergeants shall be examined in the subjects prescribed for those ranks by the current Marine Corps Order governing the basic training of enlisted men. Reports of examination for promotion up to and including the rank of sergeant of the line need not be made to the Major General Commandant.

It can be seen that these Articles are so written that almost any kind of an examination can be given and still conform to the regulations.

In a comparatively short period of service I have seen men examined and selected for promotion in several different ways and in each case the commanding officer apparently believed that he was carrying out the regulations of the Manual, yet there were vast differences in the ways by which men were selected.

I do not say that these ways are wrong and I have no intention of criticizing the officers who made promotions under the systems which I shall describe. I merely describe them to show how much variation there can be in promotion examinations and in the methods used to select enlisted men for promotion.

At one post an examining board of three officers was appointed by the commanding officer. Each company commander was directed to nominate a certain number of candidates for promotion to the rank of corporal and sergeant to appear before the board and be examined orally one at a time. The members of the board asked the different candidates various questions concerning subjects of Marine Corps Order No. 146, in order to determine whether or not the candidates possessed sufficient knowledge of these subjects to be promoted to the next higher rank. If they answered the questions satisfactorily then the board by discussion among the members decided in what order they should be placed upon the promotion roster.

Sometimes the examinations given were quite perfunctory, at other times they were quite thorough. Sometimes the board considered the candidate's service records, giving consideration to the length of service, the length of service in grade, marksmanship qualifications and conduct record. The weights given to the examination and to the service record were never fixed. They varied with each board.

At another post, company commanders were ordered to examine men in their companies and submit a promotion roster to the commanding officer of the post. When promotions were to be made they were allotted in equal numbers to each company. There was no post examining board or post examination. The scope of the examinations which the company commanders gave to select men to be put on their rosters was not defined or limited. Some gave oral and some gave written examinations. Sometimes practical examinations were given in addition to written or oral ones. Sometimes the examinations were long and sometimes short. In some companies the service record was considered, in others ignored. In some companies officers and non-commissioned officers all made recommendations as to which men should be promoted and the candidates were placed on the promotion roster according to the number of recommendations which they received.

On another occasion a post examining board of three officers was convened which gave written and practical examinations to all candidates, some sixty in numbers in two days. The examinations were strictly graded and the candidates' standings on the promotion roster were determined from these grades alone. No consideration

whatever was given to the candidates' service records and if my memory is correct a corporal having seven years' service went on the promotion roster ahead of one having fourteen years, because the former's total examination grade was 90.2 and the latter's 89.6.

On still another occasion I have seen a corporal promoted to the rank of sergeant without any examination of any kind. He was promoted because he had played on the post football team.

From these instances which I have cited it can be seen that there is no uniformity whatever in the examinations given to determine whether or not men are qualified for promotion. Where almost any kind of an examination can be given or where none at all is given it is not surprising that men unfit for promotion are often declared qualified, and promoted. Such a condition of affairs acts to the detriment of the Marine Corps, by handicapping it with inefficient and poorly qualified non-commissioned officers.

The irregularities of the present system make it very unfair to enlisted men seeking promotion. The candidate never, or I will qualify that and say rarely, knows in what manner he will be examined until he is before the examining board. He doesn't know whether his length of service and other qualifications of his service record will be considered or not. He never knows what to expect as he moves from one post to another. He may be required to take an oral or a practical examination or both of them. He may be given many questions on some subjects and none on others. He may find that his service record is the deciding factor in his promotion or that it doesn't count at all.

If these variations and uncertainties could be removed by having the scope, length, form, etc., of the examination known and fixed by order for the entire Marine Corps, men would feel that preparation for promotion would help them to attain it. A great incentive would be given them to study and prepare themselves for examinations, and such study and preparation would make them better non-commissioned officers. There is not much incentive to study at the present time, when they do not know what kind of an examination they will be given or whether their study will help them to pass it.

No two officers will ever agree exactly as to what weights should be given for service record qualifications and for examinations of different kinds. Every officer's ideas on these things differ as well as his ideas in regard to the type of examinations which should be given. Any system, no matter how carefully worked out, will be criticized. However, the really important thing is not that the system be perfect, but that it be fixed and definite.

The system which I propose and which is designed to produce standardized promotion is set forth hereinafter in general terms. The details for the system would have to be worked out by a board of officers in order to reach as just and fair a system as possible.

First, a definite date twice each year, or oftener if found to be necessary, should be set for holding the examinations throughout the entire Marine Corps. At the present time promotion boards are often convened after a vacancy has occurred. The board frequently

examines a dozen candidates and completes its work in half a day. A thing of great importance to the Marine Corps and to the candidates for promotion is settled in one day, often in a perfunctory manner. The candidates perhaps had no more than two or three days to prepare for the examination. The results of examinations hastily compiled and hastily given are not satisfactory to the Marine Corps or to the candidates because they cannot be a thorough or fair test of the candidate's knowledge and abilities.

It sometimes happens that men are on furlough when vacancies occur and examinations are given and they, unable to take the examinations, lose their chance for promotion. Such a thing could be obviated to a great extent by holding the examinations on fixed dates, say during the first fifteen days of April and October of each year. If it happened that all of the men on a promotion roster were promoted between these dates then an emergency examining board could be called and examinations given between fifteen and thirty days of the board being ordered.

By fixing the date on which promotion examinations will be given at all posts men would know exactly when they would have an opportunity to qualify for promotion and there would be a great incentive to prepare for examinations by study and practical work.

I further believe that there should be no holdover qualification for promotion except where the nature of his duty makes it impossible for a man to be re-examined.

Second, there should be a definite weight given to the qualifications of the candidate as shown in his service record.

A system of credits should be worked out for semi-annual markings, length of service, service in grade, qualification scores with the service rifle and various other weapons. Definite deductions should be made for all offenses appearing in the record. Such a system of credits and deductions would enable an enlisted man to know at any time exactly what his service and other qualifications counted towards promotion. Knowing that such a system existed would be an incentive for him to re-enlist to increase his length of service, to qualify with as high a score as possible with his weapons and to keep his record clear of offenses. As I have said before at the present time a candidate for promotion never knows what consideration an examining board will give to his record.

The weight given to the qualifications shown in the service record could be say thirty percent of the total examination grade.

Third, the candidate should be given a thorough practical examination in close order drill. Also in stripping, assembling, functioning and nomenclature, and care and cleaning of the service rifle caliber 30, the new M1 1930 rifle, the automatic pistol, the Browning automatic rifle and the Thompson sub-machine gun. All of these are basic Marine Corps weapons and every corporal or sergeant, regardless of what organization he is attached to, should be thoroughly familiar with them.

These practical examinations could be given by officers or senior non-commissioned officers detailed and supervised by the examining board. One officer or non-com-

could be assigned to give the examinations on each weapon. The candidate would go from one examination to another on a schedule and the time required to give the examinations would be reduced to a minimum. Each of these practical examinations would require about twenty minutes, so if one officer or non-com was assigned to each weapon about fifteen candidates could be examined on all the weapons in one day.

The weight given to the practical examinations could be say thirty percent of the total examination grade.

Fourth, the candidate should be given a written examination on all subjects specified in Marine Corps Order No. 146 for the grade to which he seeks promotion.

This examination should be compiled and given under regulations which will as nearly as possible standardize such examinations throughout the entire Marine Corps. Such regulations could be similar to these:

- a. The examining board consisting of three commissioned officers if such are available will compile the examination.
- b. Each member of the board will submit two questions on each subject of Marine Corps Order No. 146 upon which the candidates are to be examined. From the six questions submitted two will be drawn by lot and those two will be given on the examination.
- c. The candidates will not write their names upon their examination papers, but will use a number instead. All candidates' names with their numbers will be written upon a piece of paper and placed in a sealed envelope. The envelope will not be opened until after the examinations are all graded and the grades announced.
- d. The examination papers will be graded by two officers, not on the examining board, if such are available. They will work independently of each other and their grades will be submitted to the examining board who will average the grades to reach a final grade.
- e. Members of the examining board will not disclose to any person the nature of the questions which they submit to the board to be used in compiling the examination.

The weight of the written examination could be twenty-five percent of the total examination grade.

Fifth, the promotion board at their option should be allowed to give practical examinations on special subjects in addition to the previously mentioned practical examination.

For example where the corporal or sergeant will be required to perform duty under certain conditions with weapons, such as broadside or anti-aircraft guns on board a warship or when he is serving with a machine gun company or a field artillery battery he should be examined on the use and care of these weapons.

The weight given to these special subject examinations must be strictly limited otherwise a candidate for promotion may find that although he is well qualified with regard to all usual Marine Corps duties and weapons he cannot be promoted because of his lack of knowledge of some special weapon. This would be distinctly unfair to him.

If the weight which is allowed to be given to the special subject examination is not strictly limited the examining board, chosen from officers of an organization using special weapons, may feel that knowledge of these weapons is of great importance and may make the examinations upon them count too much. Such a procedure might benefit their particular organization, but would be detrimental to the Marine Corps as a whole.

The weight for the examination on special weapons could be fixed at fifteen percent of the total examination grade.

Officers reading this article may feel that a great many officer-hours would be required to give and grade such examinations as are proposed. This is true. Considerable time would have to be given to it, but the examining board could be empowered to appoint as many officers and senior non-commissioned officers as they saw fit to assist them in giving the various examinations. The work could thus be divided and accomplished without taking an excessive amount of time or putting an undue amount of work on any one person.

If, however, it required every day of a whole week to give the examinations I am sure that it would be well

(Continued on page 45)



Band Concert, Headquarters Camp, First Marine Brigade, Culebra

The Illumination Problem

BY FIRST LIEUTENANT ROBERT A. MCGILL, U. S. Marines

ILLUMINATION of enemy aircraft presents a problem apparently solved. This is by no means the case.

Too few people throughout the services consider the AA searchlight problem of enough importance to other than lightly dwell upon. They are conscious of the lights, and are content, as long as a satisfactory service practice is performed, to pass the matter off with little thought.

Then, too, there are those who believe that the searchlight is a military white elephant, the use of which is better adapted to recruiting purposes, searchlight displays, and synonymous with movie previews and newly opened super markets.

Objections raised to searchlight use are in general as follows:

- (a) The searchlight while in operation is an excellent means for directing the enemy bombing attack towards an objective.
- (b) The searchlight and accompanying accessories are difficult to camouflage.

Although the above arguments are not without foundation, it will be shown in the ensuing discussion that the searchlight, rather than jeopardizing the security of the base so defended is of prime importance in base defense.

The tactics of present heavy bombing aviation preclude the possibility of an attack being launched without a definite objective in mind. Any objective entailing a bombing attack, and protected by anti-aircraft artillery would first be well located by enemy reconnaissance aviation, and intelligence agencies.

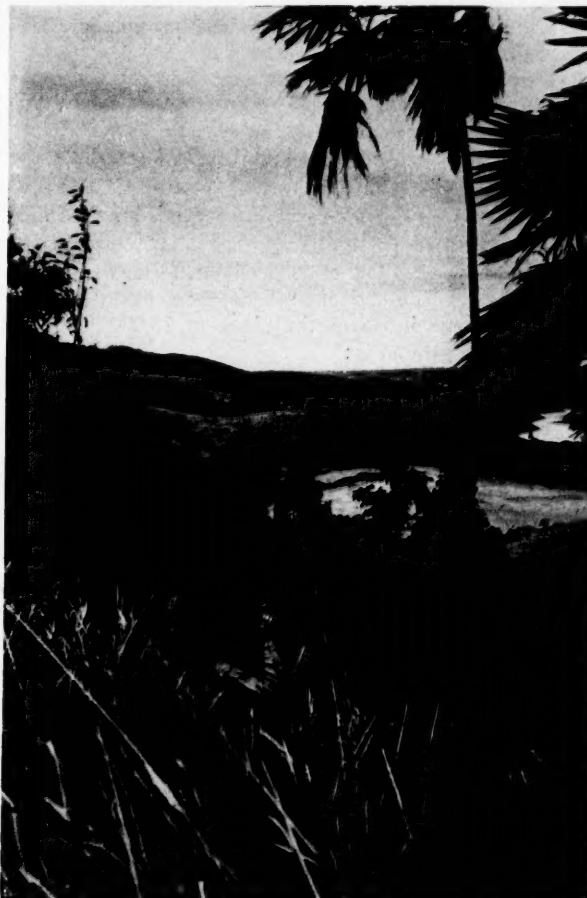
Complete blackouts have demonstrated their efficiency in hiding from the enemy the true limits of an objective, and it becomes increasingly necessary for aviation contemplating a night attack to depend almost solely on celestial navigation rather than on beacons and beams which will be made inoperative in time of war. In other words, the enemy knows where and when he is going before he starts. The lack of navigational aids on the ground will not deter him.

Searchlights do not go into action until an air attack is imminent. Their tactics are not to be continuously searching the sky for aircraft, but to illuminate only when enemy aircraft approach the objective, and when the attack is close enough to the objective to allow the gun batteries to commence their tracking preparatory for firing. Warning nets used by this battery and by the U. S. Army, have proved that a flight of planes rarely passes over an objective without the guns having been warned within ample time. By this time the attacking aircraft is close to the area to be bombed, the attackers know their objective and if they are to be driven off or destroyed, they must be fired upon. During night attack without illumination, or pursuit aviation this is impossible. If lights go into action no actual disclosure

will occur as the attacker must know where he is to get to this point.

In regard to camouflage of the light and accompanying auxiliaries: the light is no more difficult to camouflage than any other equipment of similar size. In fact, due to the high mobility of this unit, it is an easy task to return to a base or to a dense forest and remain hidden from daylight to dusk, and to occupy alternate positions on succeeding nights.

Experience with a searchlight and sound locator battery has shown that such batteries with well trained crews are very efficient, and can, with the Sperry 800,000,000 candlepower searchlight, illuminate camouflaged aircraft with enough light to make firing and tracking by the gun battery highly satisfactory. Actual observance of night firing practice in conjunction with the gun battery convinces the writer that to sacrifice possible destruction or driving off of enemy bombers in order to



On lookout for hostile forces during maneuvers

prevent disclosing the actual defense setup of the area defended, is impracticable and should not be considered.

ENEMY ATTACK AVIATION

Enemy attack aviation presents a definite, and serious threat to anti-aircraft defense. A bombing attack coordinated with attack aviation would be to the disadvantage of AA defense. Again we must depend on our fighting or pursuit aviation. I believe that darkness, in case of an "attack aviation" attack, is to the disadvantage of the enemy. Attack tactics call for hedge hopping and clearly defined objectives. Night would do much towards preventing the attacker's utilizing their attack aviation with any degree of efficiency. Flying a close formation, at night, with no running lights, and at an altitude of not more than a hundred feet presents a peril to the airmen. Of course when fire is opened by the batteries, and when searchlights go into action, well defined targets are offered. But, can attack aviation in the maximum time of three minutes, neutralize one and perhaps two gun batteries that are firing, and then destroy two and possibly three lights that are illuminating for the guns? Impossible!

For purposes of illustration let us discuss an empirical light defense: See figure 1.

Assume a 200 mile per hour bomber flying at 15,000 feet.

The bomb release line will then be approximately 3,000 yards from the objective.

T equals the sq. root of $2s$ over g .

Where t is time of fall.

g is acceleration due to gravity.

s is the altitude of the plane in feet.

$$\text{Or } T = \sqrt{\frac{2 \times 15,000}{32.16}} = 30.5 \text{ seconds (time of fall).}$$

Assume a speed of 200 miles per hour. (100 yds. per second approx.) The horizontal distance traveled by a bomb from the time it leaves the plane at 15,000 feet until striking the ground is:

100 (forward velocity of bomb) \times 30.5 equals 3,050 yards.

The critical zone or the distance traveled by the plane beyond the bomb release line in one minute is 6,000 yards.

The outer ring of lights, nine in number, can be placed on the outer edge of the critical zone without sacrificing their mutually supporting distance or 6,000 yards. Let us further assume that the target is picked up 3,000 yards forward of the outer ring of lights. This distance or 3,000 yards, plus the distance the lights are forward of the gun batteries gives 9,000 yards. Translated into time at 100 yards per second, the target will be illuminated for one and one-half minutes before the plane reaches the bomb release line. Our mission is to illuminate targets early enough so that the gun batteries may track long enough to open fire when the targets approach extreme range. In the above we carried out our mission. But is our problem solved? No!

Let us reconsider.

We assume no terrain problems in the above.

We assume ideal weather conditions, and no moon.

Conditions of terrain such as mountain, swamps, lack

of a road net, and similar obstacles will some times prevent the ideal emplacement of lights. This is not serious as alternate positions within a thousand yards do little towards preventing a workable and efficient setup.

Weather and natural light conditions are our greatest bugbears. Heavy fogs, rain, and snow we can pass off lightly as crippling aircraft operation, and presenting no threat to us.

First and foremost natural light conditions are ranked as a menace to our efficient operation. To clarify the above: it is almost an impossibility for gunbattery trackers to see planes during the half hour preceding darkness at night, and the half hour before broad daylight in the morning. From experience it may be said that the lights have no illuminating power whatsoever. There are two reasons why this time of attack might not be chosen by the attacker. Whether he attacks at twilight or at daybreak, half of his journey, either coming or going will be in daylight, a decided disadvantage. Not only will his presence be more easily discovered by warning nets, but the ease of his attack by our pursuit or fighting aviation is enhanced. It is felt that the answer to the periods of ineffectiveness is protection by friendly fighting or pursuit aviation.

Although there is no doubt that moonlight limits the range and efficiency of lights, its effect does not hamper satisfactory illumination to as great an extent as some may believe. Some conclusions arrived at by experience follow. Even with a single camouflaged plane at 16,000 feet satisfactory results were obtained during a period of full moon. It must be admitted, however, that the moon was not in the direct background of the target plane.

Little or no interference is experienced from the moon between new moon and first half, and between last half and dark of moon. An air attack launched with the moon in the background (as any sensible air officer would do unless prohibited by obstacles or unfavorable avenues of approach) presents a serious problem. Here again as in the case of the twilight and daybreak periods the burden must fall upon our own fighter or pursuit aviation with the enemy being as well illuminated as possible under existing conditions.

One other difficulty arising, in which illumination can play no part, is the bombing formation flying above an intermediate cloud layer or ground haze. This will blind the searchlight commander, the height finder operator, and the director trackers. If the bombing formation can be navigated accurately enough so the bombardier will be reasonably sure when he has reached the bomb release line, AA artillery is helpless, and again fighter or pursuit aviation comes to the fore.

Scattered clouds cause difficulty. Only a well trained searchlight commander can continue to carry the target after it passes through intermittent clouds. But it can and has been done.

We do not want to lose sight of the following: from 12 to 18 heavy bombers flying an all around defense formation present a very large area to illumination, increasing chances for a quick pickup and a long carry. True also is the fact that the sound is multiplied in intensity, leading towards an easier pickup.

When to employ friendly aviation and when to employ AA calls for a rapid communication system, and excellent liaison between AA and aviation. Word must be passed to the guns at the precise moment it is desired to employ aviation. The above is also true of illumination. An air-searchlight liaison officer must be present to direct illumination if any is desired.

For example, an attack is imminent. Air force having been warned of the impending attack, has pursuit aviation in the air patrolling. It can be easily seen that it would be hazardous for friendly aviation to attack while firing of batteries is in effect. At what point in the attack firing by batteries is to give way to pursuit aviation, or pursuit aviation give way to the batteries, must be the duty of one officer, so trained that he will know when to discontinue any phase of the defense. He must have at his disposal means to transmit his orders rapidly.

ISLAND DEFENSE

The illumination for an island defense, or for base, a portion of whose boundary is on the water presents a problem the tactics of which are still in a formative stage.

The warning net presents no problem. Trawlers or other small auxiliaries, radio equipped, and either anchored or hove to the proper distance from the base, will track a formation satisfactorily.

In an island defense the big problem is to get the lights far enough away from the objective to give the guns enough time to track and fire. On some islands of small area this, no doubt, will be impossible.

There are two alternatives. Place the lights as far out as possible with the hope of using them as soon as the attacker is in range, and also utilize them as illumination for possible night surface targets. The other alternative is to preserve the tactical set up by the use of searchlight ships, hove to, or anchored in required positions. At present there are no ships carrying 60 inch searchlights. A self contained searchlight unit, complete with sound locator, power plant, and control station is suggested.

The first objection is that there would be no stable platform. The other objection would be that the light and sound locator would easily get out of orientation.

Both of the above can be eliminated if the base de-

WAR DEPARTMENT OFFICE OF THE CHIEF OF INFANTRY WASHINGTON

September 23, 1940

Major General Thomas Holcomb,
Commandant, United States Marine Corps,
Navy Building,
Washington, D. C.

DEAR GENERAL HOLCOMB:

Please accept my heartiest congratulations on the decisive victory of the Marine Corps Team in the National Rifle Team Match.

Sincerely,

GEORGE A. LYNCH,
*Major General,
Chief of Infantry.*

fended is of enough importance to warrant expenditures of money for specialized equipment.

It might be much more satisfactory in the fortification of islands of small area, to use the lights only in the event of a night surface attack. An island thousands of miles from an enemy base presents a difficult navigation problem to enemy bombers endeavoring to locate it. I believe in the above case the best defense against a night bombing attack would be a complete blackout.

The problem that confronts us then, is to adapt the equipment that we have now to our best interest. An all around defense of a base calls for close cooperation and liaison between aviation and ground forces. Too few times aviation's inherent problems, capabilities, and limitations are not fully appreciated by ground troops. In the interest of an efficient defense, especially at nights, we must have a definite plan in mind for the proper employment of ground batteries and air support.

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LEGISLATION

[PUBLIC—No. 775—76TH CONGRESS]

[CHAPTER 694—3D SESSION]

[H. R. 10030]

AN ACT

Increasing the number of naval aviators in the line of the Regular Navy and Marine Corps, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Naval Aviation Personnel Act of 1940."

SEC. 2. The President of the United States is authorized to appoint to the line of the Regular Navy and Marine Corps, by and with the advice and consent of the Senate, as many naval aviators of the Naval and Marine Corps Reserve as he may deem necessary and the authorized number of commissioned officers of the line of the Navy and the Marine Corps is increased accordingly. These officers shall be appointed to the same grade occupied by them in the Naval or Marine Corps Reserve, as the case may be, at the time of such appointment and shall take precedence in such grade in accordance with the provisions of section 8(e) of this Act: *Provided*, That they shall first establish their moral, physical, mental, and professional qualifications in accordance with such rules and regulations as the Secretary of the Navy may prescribe: *Provided further*, That officers so appointed shall, on June 30 of the calendar year in which they are appointed, have completed not less than eighteen months of continuous active service next following the completion of their duty as aviation cadets undergoing training and shall, on June 30 of the calendar year in which appointed, be less than twenty-six years of age: *Provided further*, That during a period of six months from the date of approval of this Act the Secretary of the Navy is authorized to waive the foregoing age requirement and continuous service requirements: *Provided further*, That during a period of six months from the date of approval of this Act those naval aviators who have not undergone training as aviation cadets but who have completed not less than one year of active service other than training duty in the Naval or Marine Corps Reserve may also be so appointed regardless of their age. Officers appointed under the authority of this proviso shall, upon appointment, be additional numbers in the grade to which appointed and in any grade to which they may thereafter be promoted: *And provided further*, That in computing the pay of officers appointed under the authority of this Act, credit for longevity shall be given them for all service, including service as aviation cadets, with which they have heretofore been credited.

SEC. 3. Each officer appointed pursuant to this Act to the grade of ensign or second lieutenant and each officer so

appointed to a grade above that of ensign or second lieutenant shall, respectively, become eligible for promotion, or for consideration by a line selection board as of the date the line officer next junior to him at the date of appointment becomes so eligible. The qualification of sea service prescribed in section 11(c) of the Act of June 23, 1938 (52 Stat. 948), shall not apply to such officers while in the grade to which originally appointed.

SEC. 4. All officers, warrant officers, nurses, and enlisted men of the United States Naval Reserve or United States Marine Corps Reserve, who, if called or ordered into active naval or military service by the Federal Government for extended naval or military service in excess of thirty days, suffer disability or death in line of duty from disease or injury while so employed shall be deemed to have been in the active naval service during such period, and they or their beneficiaries shall be in all respects entitled to receive the same pensions, compensation, retirement pay, and hospital benefits as are now or may hereafter be provided by law or regulation for officers, warrant officers, nurses, and enlisted men of corresponding grades and length of service of the Regular Navy or Marine Corps: *Provided*, That if a person who is eligible for the benefits prescribed by this Act be also eligible for pension under the provisions of the Act of June 23, 1937 (50 Stat. 305), compensation from the United States Employees' Compensation Commission under the provisions of section 304 of the Naval Reserve Act of 1938 (52 Stat. 1181) or retired pay under the provision of section 310 of the Naval Reserve Act of 1938 (52 Stat. 1183), he shall elect which benefit he shall receive.

SEC. 5. Sections 6 and 8 of the Naval Aviation Reserve Act of 1939 (53 Stat. 820; U. S. C., Supp. V, title 34, secs. 849d and 849f) are hereby repealed.

SEC. 6. When officers commissioned in the Naval or Marine Corps Reserve pursuant to the Naval Aviation Reserve Act of 1939 are released from active duty that has been continuous for one or more years, they shall be paid a lump sum of \$500 for each complete year of active service other than duty as aviation cadets undergoing training and if released from active duty otherwise than upon their own request or as a result of disciplinary action, this lump-sum payment shall be prorated for fractional parts of each year of such service. The lump-sum payments authorized herein shall be in addition to any pay, allowances, compensation, or benefits which they may otherwise be entitled to receive.

SEC. 7. The Secretary of the Navy is authorized, in his discretion, to distribute the enlisted personnel of the Marine Corps among the various grades in such numbers as he deems to be to the best interests of the naval service.

SEC. 8. The Naval Reserve Act of 1938, approved June

(Continued on page 45)

AMENDMENT TO THE ACT OF JUNE 23, 1938.
(52 Stat. 944).* H. R. 10295.

The following amendment to the Act of June 23, 1938, was passed by the House of Representatives on September 14, 1940:

Be it enacted, etc., That the Act of June 23, 1938 (52 Stat. 944), is hereby amended as follows:

Section 5, strike out subsection (a) and substitute the following:

"(a) The board for the recommendation of line officers for promotion to the grades of rear admiral and captain shall consist of nine rear admirals on the active list of the line of the Navy, not restricted by law to the performance of shore duty only. The board for the recommendation of line officers for promotion to the grade of commander shall consist of three rear admirals and six captains on the active list of the line of the Navy, not restricted by law to the performance of shore duty only. These boards shall be appointed by the Secretary of the Navy and convened at least once each year and at such times as the Secretary of the Navy may direct."

Section 7, in subsections (a) and (b), strike out "or who is not physically qualified."

Section 8, in subsection (a), strike out "other than medical."

Section 9, strike out subsection (f) and substitute the following:

"(f) All reports or recommendations of a line selection board under any provision of law shall require the concurrence of at least two-thirds of the members."

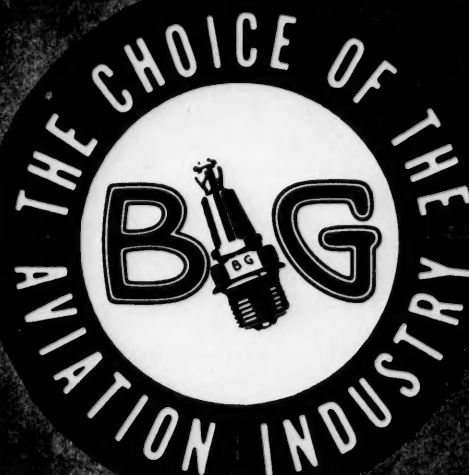
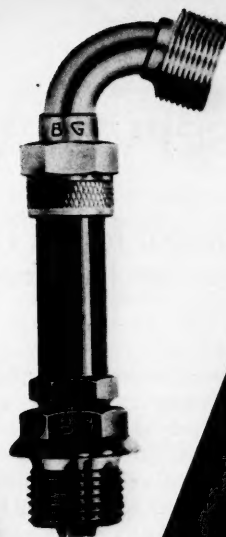
Section 11, in subsection (b), at the end of the second proviso insert "with retired pay computed as provided in section 12 (b) of this act."

Section 12, subsection (f), in line 5 change "from" to "to," and in line 6, after "promoted", insert "computed as provided in subsection (b) of this section."

Section 12, strike out subsection (k) and substitute the following: "(k) Lieutenant commanders and lieutenants with date of rank as such prior to June 23, 1938, and lieutenants (junior grade) who on that date were carried as additional numbers in grade by reason of not having been recommended for promotion, shall, at their own request, in lieu of honorable discharge as provided in subsection (c) of this section, be retired on June 30 of the fiscal year in which they fail of selection as best fitted the second time or on June 30 of the fiscal year in which they complete the period of service designated in the act of March 3, 1931, as amended (U. S. C., title 34, Supp. III, secs. 286a and 286i), whichever date shall be later with retired pay computed as provided in subsection (b) of this section: *Provided*, That any officer retained on the active list pursuant to this subsection shall be ineligible for consideration for promotion by subsequent selection boards: *Provided further*, That lieutenants who served in the Navy or Naval Reserve Force prior to November 12, 1918, and who shall have completed not less than 21 years of service, and who subsequent to June 23, 1938, have been or shall hereafter be retired under any provision of law, shall be advanced to the grade of lieutenant commander on the retired list effective from date of retirement with the retired pay of that grade."

Section 14, in line 9 of subsection (a), after "grade", insert "with probationary appointments."

*An Act to Regulate the Distribution, Promotion and Retirement of Officers of the line of the Navy.



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Reserve Affairs

BY COLONEL JOSEPH C. FEGAN, U.S.M.C.

The Director, Marine Corps Reserve

THE Director, having inspected all except one or two of the Reserve Battalions during their summer training period, found that the character of training as a rule was sufficient and that the programs were working out as well as could be expected under such conditions. Next year, attempt will be made to send the battalions to larger Posts where more personnel of the regular establishment is available. By far the best training is received either at Quantico, San Diego or Parris Island, where the Reserve units and regulars are trained jointly. Also, it is anticipated that the training period for next year will extend over a period of three weeks instead of two.

On the whole the battalions were found to be in excellent condition; the main demerit being the fact that they were under strength. Due allowance has been given for the fact that some battalions went to camp under-officered. This of course is to be expected, as after all, it is the first duty of the Reserve to furnish the regular Marine Corps with officers and men. Those officers now on duty with the regular establishment are unquestionably getting top training and experience, and if and when they return to their battalions they will be much better officers in a professional way.

A noticeable increase in the allowance of .30 caliber ammunition will be forthcoming next year, rectifying the shortage that hampered training this year. Also, an increase in clothing allowance has been placed in the Budget.

If organization commanders will keep in touch with their respective Reserve District Commanders on the subject of the location of Volunteer Reserve officers, such organization commanders will thus be in position to recruit vacancies among their officer personnel to a better advantage. A close touch between both of these offices is desired at all times.

There has been cultivated a habit by some Battalion Commanders and Inspector-Instructors of writing to members of the Director's Staff personal letters dealing with official topics and expecting official action as a result of such letters. It must be remembered that no official action can be taken on such letters; that this Division must refer 90% of its business to other divisions at this Headquarters and the chiefs of such other divisions will not recognize personal letters and treat them as official requests. Therefore, initiation of all official matters from Battalion Headquarters or the Office of the Inspector-Instructor will be handled in official form.

Remembering that authority has been given to promote qualified armorers of the Organized Reserve to the rank of corporal, the promotion to the rank of sergeant

of the more competent armorers may be looked forward to in the near future.

The Director inspected both the Eastern and Western Platoon Leaders' Classes this summer and found that they represent a fine lot of young Americans. He therefore wishes to congratulate the Inspector-Instructors on their selection of candidates for these Classes and on the splendid performance of this phase of their duties.

It is planned to increase as soon as possible, the total battalions of the Organized Reserve to 30 in number. At present we have a total of 23. The locations for four additional ones will be selected this winter. Among the cities under consideration are Atlanta, Georgia; Cleveland, Ohio, and Houston, Texas.

The average costs of training the Organized Reserve during the fiscal year 1940 was \$34,305.21 per battalion. The total number of officers and enlisted men of the Marine Corps Reserve as of 31 July, 1940, and their distribution, are shown in the following table:

OFFICERS	
Organized	357
Volunteer	811
Total	1,168
ENLISTED	
Organized	7,170
Volunteer	5,994
Fleet	1,912
Total	15,076

The Marine Corps Reserve Service Medal is now available for distribution to the officers and enlisted men of the Medical Corps of the Naval Reserve attached to and serving with the Organized Marine Corps Reserve Units, under the same conditions as apply to the Marine Corps Reserve.

The question of travel performed by Inspector-Instructors to inspect companies or parts of companies not quartered in the same city as the Battalion Headquarters has been taken up with the Major General Commandant. He directs that Inspector-Instructors may make inspections on a mileage basis when really necessary, (approximately once per quarter). However, no fixed date should be given in advance of the visit of the Inspector. Each quarterly trip will be requested formally to this Headquarters for authorization to perform such travel. The Naval Reserve Act of 1938 requires that Battalion Commanders performing such travel must be examined physically immediately prior to the beginning of such travel and again upon completion of such travel. They, too,

should visit outlying units at least quarterly and not in company with the Inspector-Instructor, unless it is for the best interests of the Government. Request for such travel from Battalion Commanders, accompanied by a report of physical examination on Form "Y" will bring about a set of travel orders covering the performance of the necessary travel. This travel will not be ordered unless the units concerned are without the city limits of the city in which battalion headquarters is located. The travel of kindred nature as outlined herein, when desired to be performed by enlisted members of the I-I staff will be authorized by the Inspector-Instructor in each case that travel is necessary in the best interests of the Government, upon receipt of authority to do so. Existing instructions on this point will be re-read.

In order to comply with the law regarding physical examinations of Reserve officers assigned to active duty for training for short periods, and at the same time elimi-

nate some of the cumbersome paper work attached thereto, the following plan is under consideration and will probably be approved and published in the near future.

Upon requesting orders to active duty for training, the Reserve officer is examined physically for such active duty, and report of physical examination on Bureau of Medicine and Surgery Form "Y" is prepared by the medical officer conducting the examination, stating in the findings thereof that the officer is (or is not) found physically qualified for active duty. (If not physically qualified for active duty he will not be so ordered.) Then, upon completion of his active duty training, the officer is again examined, and if found physically qualified for release from active duty the medical officer places an endorsement on the same form "Y" to the effect that "On ——— date the officer concerned has been examined and it is found that his health has not been adversely

(Continued on page 38)



MARINE CORPS RESERVE RIFLE TEAM, CAMP CURTIS GUILD, WAKEFIELD, MASSACHUSETTS, 1940

Front row, left to right: Pfc. Richard G. Layng, Sgt. Hall Webber, 1st Sgt. Rudolph S. Teerela, Corp. Hugh F. Elrod, Pfc. Ralph E. Nissen, Pvt. Thomas W. Constant, Pfc. Theophile De Du Chateau, Corp. Gerald M. Bolen. Second row, left to right: Claud A. Mudd, Pl. Sgt. Dennis M. Cantrell, Corp. Theodore J. Sauer, Jr., 2nd Lt. James A. Moreau, 2nd Lt. Robert B. Shepard, Major Joseph F. Hankins, 2nd Lt. Douglas C. McDougal, Jr., 2nd Lt. Emmet O. Swanson, MGun. Frank M. Richard, MGy. Sgt. John Blakley. Third row, left to right: Pfc. Geoffrey E. Eklund, Corp. William G. Mix, Sgt. Robert W. Waugh, Pl. Sgt. Clarence J. Buck, Pfc. Edward J. Schofield, Corp. Warren F. Lloyd, Pfc. Horace W. Card, Jr., Corp. Lester Miller, Gy. Sgt. John F. Jost, 1st Sgt. Arthur W. Sievers, Corp. William R. Piggott, Corp. George M. Sivec.

MARMON-HERRINGTON EXPANDS PLANT TWICE IN THREE MONTHS

Indicative of the rapidly growing popularity of Marmon-Herrington All-Wheel-Drive trucks and passenger vehicles, for industrial, commercial and military usage, are the greatly increased manufacturing facilities for these units which have become necessary.

A building program, which doubled the capacity of the plant has just been completed, and now the company is starting a further plant expansion of approximately equal magnitude. Additions to the already greatly enlarged truck and tractor assembly plants and to the office building as well as a new service building are now under construction. Starting from scratch less than ten years ago, the company's plant site now comprises 16 acres of ground, with numerous buildings and private railroad facilities.

"The Marmon-Herrington Company is the logical outgrowth of experience gained in the World War, where A. W. Herrington, the president of the company, held an important post in the motor transport corps of the A. E. F.," says an official of the company. "There, in French mud, the futility of conventional rear wheel drive vehicles and their inability to operate successfully in off-the-highway service was clearly revealed. There the idea for establishing his own company and building highly specialized vehicles for extremely difficult service was formed.

"The first All-Wheel-Drive vehicles manufactured by the Marmon-Herrington Company were extremely large and powerful four-wheel-drive and six-wheel-drive units with gross capacities up to 70,000 lbs. Thirty-three models of these big powerful trucks are now available, and hundreds are in use all over the world.

"Encouraged by the world wide acceptance of these vehicles, and sensing the demand for lighter units having the same advantages, the company, a few years ago, began converting all standard Ford trucks, commercial cars and passenger cars to All-Wheel-Drive in its Indianapolis plant. The demand for these fleet, highly maneuverable and dependable vehicles has been almost as sensational as their amazing performance in mud, sand and snow, and their ability to climb incredibly steep grades.

"It was never the idea of Mr. Herrington, or of other officials of the company, that these vehicles would supplant the conventional rear wheel drive truck for ordinary transportation on good roads. For use in the oil fields, in logging, mining, road building, snow removal, and for public utility and military services — wherever supreme traction is necessary for cross-country travel, Marmon-Herrington All-Wheel-Drives have found a ready sale. More and more uses for them are constantly being discovered, including the hauling passengers and heavy freight over slippery highways, where sharp curves and steep grades are rendered far more safe by All-Wheel-Drive traction.

"The fact that these vehicles have won the unqualified approval of our own and many foreign governments is the best proof of their sound design and dependable operation. Thousands of Marmon-Herrington All-Wheel-Drives and specialized military units will contribute to the greater de-

fense of America, by their ability to go places and do things no other vehicles would dare attempt."

With deepest regret we announce the death of Mr. Walter C. Marmon, Chairman of the Board of Directors of Marmon-Herrington Co., Inc., at his home in Brendonwood, Indianapolis, Indiana, on Thursday, August 29, 1940.

CATERPILLAR TRACTOR CO. ANNOUNCES NEW MODELS

To round out its popular line of Diesel Electric Sets, Caterpillar Tractor Co. has announced two new models, the 88-41 and the 77-34.

Both units are powered by four-cylinder Diesel engines. The 88-41, with a bore of $5\frac{3}{4}$ " and an 8" stroke, develops 41 KW at 900 RPM, when equipped with radiator fan. Without fan, kilowatt rating is 44.

The 77-34 has a bore and stroke of $5\frac{1}{4}$ " x 8", and develops 34 KW at the same RPM when equipped with fan. It is rated at 36 kilowatts without fan. Both ratings are for the polyphase, 60-cycle set. Single phase ratings are slightly lower.

The sets are completely self-controlled, requiring no gadgets other than a circuit breaker. They are easy to install, and can be set up and running in less than an hour after delivery. Inbuilt regulation enables the sets to pick up relatively large motor loads with a minimum of light flicker and voltage drop.

Because of the wide application of these sets, maintenance problems have been simplified by having the entire unit serviced by "Caterpillar" distributors. They are designed to be operated by personnel without special training.

There are only three operating adjustments on the engines, and none of these involve the fuel system. The generators are direct-connected, rotating field type, available as 3-phase or single phase, 60-cycle or 50-cycle, and with a wide variety of voltages.

RESERVE AFFAIRS

(Continued from page 37)

affected by the active duty just performed."

This system will eliminate the preparation of a second form "Y," and may be used, if authorized, only in cases where the officer is on active training duty for a short period of time, possibly ten days or less.

Every effort will be made by Inspector-Instructors and Commanding Officers to bring their battalions up to the fixed authorized strength as soon as they can consistently do so and not subject themselves to poor investments such as selective service dodgers or men of that character.

It must be remembered that our Reservists are not subject to selective service laws or other similar legislation. Our officers and men have already aligned themselves

with the Marine Corps and they in no way fall under the provisions of such laws. The legislation enacted by the Congress recently which calls for training duty for the National Guard and the Army Reserve does not affect similar individuals or units of the Marine Corps Reserve. We are governed by the Naval Reserve Act of 1938 and it is only when that Act is being interpreted or amended by Congress that we become affected.

The question of separate typewriters for the Inspector-Instructor's office has been studied and a decision has been reached that all work required of that office will be done on one of the four machines authorized for Battalion Headquarters. Battalion Quartermasters will requisition their full allowance of typewriters and repairs for typewriters on hand that are in bad condition. All machines must be kept in serviceable condition at all times.

It has been noted that some Reserve officers are not keeping their Marine Corps Manual Changes posted to date. Failure to receive these changes in numerical order should be promptly reported to Headquarters.

Prior to the meeting of the next Marine Corps Reserve Policy Board the problem of a new service-record form for the Reserve will be considered. Suggestions regarding revision of the present form will be welcome.

Battalions having bands and desiring music for same will communicate directly with Captain William H. Santelmann, Leader, U. S. Marine Band, Marine Barracks, 8th and I Streets, S. E., Washington, D. C.

The following recapitulation shows the progress of the officers and the number assigned to the First, Second, and Third Reserve Officers' Schools during the past twelve months:

School	No. Assigned		
	Capt.	1st Lt.	2nd Lt.
First Officers' School..... (1 Oct. 1939)	..	10	105
Second Officers' School..... (1 April, 1940)	..	3	47
Third Officers' School..... (19 August, 1940)	5	25	121

Members of the 3rd Reserve Officers' School are assigned for instruction as follows:

Base Defense Weapons Class.....	11
Junior Course	32
Basic Course	108

There are at present on active duty with the regular Marine Corps 82 members of the 1st Officers' Class and 45 members of the 2nd Officers' Class. Seven Second Lieutenants have been promoted to First Lieutenant while on active duty, while eight former Reserve officers have been given regular commissions in the U. S. Marine Corps as a result of competitive examination. The Reserve officers now serving with the regular Marine Corps are distributed at posts and stations throughout the Marine Corps; Quantico, San Diego, Parris Island, Pearl Harbor, etc.

In accordance with the Naval Reserve Act of 1938, those Marine Corps Reserve officers now on *active duty* due to the Limited National Emergency in the rank of first lieutenant and above, and those who may hereafter

be so assigned, will be promoted in the same manner as are officers of the regular Marine Corps. This means that a Selection Board will be convened to select such first lieutenants and above as are eligible for promotion to the next higher grade. This selection system does not apply to Reserve officers not on active duty due to the emergency.

The time of meeting of the selection board is not definitely known at this time, but it is known that only the names of those due for promotion to the next higher rank will be considered by the Board. Examinations for those selected for promotion will be conducted in accordance with existing orders on the subject which apply to the regular Marine Corps.

The above is the Judge Advocate General's interpretation of the Naval Reserve Act of 1938 and his decision was approved by the Secretary of the Navy on 22 August, 1940. Due to this decision, those officers now on active duty and due for promotion will not be examined for promotion until they have been selected for such promotion by a duly convened selection board.

Of the Reserve officers now on active duty with the regular Marine Corps, including the 3rd Officers' Class, 171 are graduates of the Platoon Leaders' Class. Six Honor Graduates of last year's Platoon Leaders' Class were commissioned in the regular Marine Corps. Sixteen graduates of this year's Platoon Leaders' Class are being considered for immediate commissioning in the Marine



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Corps Reserve for assignment to the 3rd Reserve Officers' School.

The Marine Corps Reserve Rifle Team participated in the United Services of New England Matches at Wakefield, Massachusetts, during the month of July.

The basic thought accompanying the formation of our rifle team is that it was designed for the purpose of educating a certain number of reservists who have a special interest in small arms (firing) as coaches for our organized reserve battalions. Therefore, it is desirable each year to have at least two new men from each battalion receive this opportunity of advanced training. The trophies and prizes won by our rifle team are considered secondary to the turning out of qualified coaches for the battalions.

Through the kindness of the Bureau of Aeronautics and the officers in command at the Naval Air Station, Lakehurst, New Jersey, particularly Lieutenant Commander G. H. Mills, U. S. Navy, and Lieutenant Colonel J. F. Moriarity, U.S.M.C., four battalions of the Marine Corps Reserve have performed their annual field training at that station. The facilities for such training at Lakehurst are excellent, the cooperation of permanent station personnel outstanding, and it can be said that the training received by the battalions there approaches closely that received when Reserve units are combined with units of the Fleet Marine Force.

Three battalions of the Marine Corps Reserve were trained this year at Camp Perry, Ohio. Training at this excellent National Guard Camp was made possible through the kindness of Major General Gilson D. Light, the Adjutant General of Ohio. Range facilities at Camp Perry are unsurpassed anywhere and the battalions training there during the past summer took full advantage of this fact.

As usual, we counted upon and received from Colonel Rene E. DeR. Hoyle, U. S. Army, and his staff the fine spirit of friendship and material help always forthcoming at Fort Hoyle, Maryland, in the training of the 7th Battalion, Marine Corps Reserve (Artillery) at that post.

The Armory training schedule for the present armory year should have been going full swing by the 15th of September. The training program is more elastic this year, much of the details of this training being left to the decision of the Battalion Commander and the Inspector-Instructor. Although basically standard for all battalions, local conditions make certain deviation from the schedule necessary, and this year's program was designed to serve the best purpose possible and yet allow flexibility to meet local conditions.

A plan is under way to employ members of the organized Reserve over 30 years of age for duty at various Navy Yards in the vicinity of their homes, in order to relieve regular Marine Corps personnel for duty with combat units. It is believed that many of our reservists will welcome this opportunity to serve near their home stations. However, it is possible, depending upon future developments, that certain reservists may be assigned to this duty at stations some distance from their homes. More news on this topic is forthcoming.

The question of identification cards to be issued to

members of the Marine Corps Reserve has come up, now that some form of Selective Service is almost a certainty. This matter has been given serious consideration, and the Director feels that the issuance of such cards should not be accomplished at this time. This is based on the fact that Commandants of the various Navy Yards desire to keep out people who are not actually performing duties at the Yards, and the fact that such cards, if lost, might fall into the hands of unauthorized persons who would use them to the detriment and embarrassment of the Marine Corps Reserve.

It is believed that arrangements can be made locally between Battalion and Reserve District Commanders and the Commandants of local Navy Yards to handle the identification of Reservists satisfactorily.

The proceedings of the Marine Corps Reserve Policy Board, which met on March 30, 1940, recommended as follows:

(1) Attention is invited to the fact that the Marine Corps Reserve is far short of the strength and equipment required to fulfill its mission, and in view of the international situation it is recommended that steps be taken to secure appropriations necessary for procurement and training within the purpose and intent of the Naval Reserve Act of 1938.

(2) That the existing laws be amended to permit members of the Marine Corps Reserve to receive the same benefits now authorized by law for members of the regular Marine Corps in the event of injury or death while performing active military or naval service, and that members of the Marine Corps Reserve shall be considered as performing active military or naval service while performing active duty with or without pay, training duty with or without pay, drills, equivalent instruction or duty, appropriate duty, or other prescribed duty, or while performing authorized travel to or from such duties.

(3) That a comprehensive program for procurement of permanent armories be undertaken, to the end that units of the Naval Reserve and Marine Corps Reserve be adequately housed.

(4) That the Marine Corps Reserve be authorized to perform drills with pay on Sundays. Such authorization will permit training otherwise impracticable because of joint use of facilities and equipment and availability of certain personnel.

(5) That further study be made of the Naval Reserve medical personnel distribution, with a view to providing the Marine Corps Reserve activities with necessary personnel. This recommendation has been found necessary due to the unavailability of Naval Reserve medical personnel in certain geographical locations.

(6) That the law be amended to provide that chief warrant officers of the Marine Corps Reserve shall receive the same pay and allowances as chief warrant officers of the regular Marine Corps.

(7) That Naval Reserve medical personnel on duty with the Marine Corps Reserve be awarded the Marine Corps Reserve Service Medal under the same requirements as prescribed for members of the Marine Corps Reserve.

(8) That existing laws be changed to the end that officers of the Marine Corps Reserve shall take precedence among themselves and among officers of the regular Marine Corps in their respective ranks or grades according to the dates and numbers of their commissions.

Eight different topics were brought before the Secretary of the Navy for his judgment, the proceedings have been returned, and the undersigned finds that the following action was taken:

Number 8 was disapproved with the understanding that an amendment of section 311 of the Naval Reserve Act be considered. This question will be taken up again by the forthcoming Reserve Policy Board which will meet this coming midwinter.

The Weinmann Medal which is presented by the National Society, United States Daughters of 1812, has an official footing, and the ribbon or the medal may be worn in accordance with existing regulations governing kindred decorations.

It is apparent that some sort of Federal military selective service will be made mandatory. This will bring about an increase in number of applicants to enroll in our organized reserve units. Battalion commanders should be careful to avoid enrollment of individuals who desire to avoid selective service. It is history that "draft-dodgers" seek shelter in organizations similar to ours temporarily and turn out to be bad investments. Please keep a bright outlook to sidestep enrolling this type of men.

It is my desire to provide a certain promotion for all older non-commissioned officers, advancing them to the warrant rank. A warrant officer's examination is quite a rigid one. Therefore, battalion commanders, before recommending worthy non-commissioned officers, should consult such non-commissioned officers on the scope of the examination and the probable chances of their passing same.

The authorized complement of Battalion bands (1 First Sergeant, 2 Sergeants, 3 Corporals, and 22 Privates First Class and Privates) will remain in effect for the time being. However, it is noted as strength reports come in that 30% of the privates first class and privates have not been appointed Pfc's. It is desired that the full quota of privates first class within each band be so appointed if qualified. Attempt is being made to increase the ratio of non-commissioned officers in the band section. It is also desired that those reservists assigned to band duty be required to perform band duties only and not be used for other purposes unless absolutely necessary.

H. R. 10030, which is an Act increasing the number of Naval Aviators in the line of the Regular Navy and Marine Corps, and for other purposes, signed by the President on 22 August, 1940, has the following provisions applicable to the Marine Corps Reserve:

"The President of the United States is authorized to appoint to the line of the Regular Navy and Marine Corps, by and with the advice and consent of the Senate, as many naval aviators of the Navy and Marine Corps Reserve as he may deem necessary and the authorized number of commissioned officers of the line of the Navy and the Marine Corps is increased accordingly. These

officers shall be appointed to the same grade occupied by them in the Naval or Marine Corps Reserve, as the case may be, at the time of such appointment and shall take precedence in such grade in accordance with the provisions of section 8(e) of this Act: Provided, that they shall first establish their moral, physical, mental, and professional qualifications in accordance with such rules and regulations as the Secretary of the Navy may prescribe: Provided further, that officers so appointed shall, on June 30 of the calendar year in which they are appointed, have completed not less than eighteen months of continuous active service next following the completion of their duty as aviation cadets undergoing training and shall, on June 30 of the calendar year in which appointed, be less than twenty-six years of age; Provided further, that during a period of six months from the date of approval of this Act the Secretary of the Navy is authorized to waive the foregoing age requirement and continuous service requirements: Provided further, that during a period of six months from the date of approval of this Act those naval aviators who have not undergone training as aviation cadets but who have completed not less than one year of active service other than training duty in the Naval or Marine Corps Reserve may also be so appointed regardless of their age. Officers appointed under the authority of this proviso shall, upon appointment, be additional numbers in the grade to which appointed and in any grade to which they may thereafter



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be promoted: And provided further, that in computing the pay of officers appointed under the authority of this Act, credit for longevity shall be given them for all service, including service as aviation cadets, with which they have heretofore been credited.

"Each officer appointed pursuant to this Act to the grade of ensign or second lieutenant and each officer so appointed to a grade above that of ensign or second lieutenant shall, respectively, become eligible for promotion, or for consideration by a line selection board as of the date the line officer next junior to him at the date of appointment becomes so eligible. The qualification of sea service prescribed in section 11(c) of the Act of June 23, 1938 (52 Stat. 948), shall not apply to such officers while in the grade to which originally appointed.

"All officers, nurses, warrant officers, and enlisted men of the United States Naval Reserve or United States Marine Corps Reserve, who, if called or ordered into active naval or military service by the Federal Government for extended naval or military service in excess of thirty days, suffer disability or death in line of duty from disease or injury while so employed shall be deemed to have been in the active naval service during such period, and they or their beneficiaries shall be in all respects entitled to receive the same pensions, compensation, retirement pay, and hospital benefits as are now or may hereafter be provided by law or regulation for officers, warrant officers, nurses, and enlisted men of corresponding grades and length of service of the regular Navy or Marine Corps; Provided that if a person who is eligible for the benefits prescribed by this Act be also eligible for pension under the provisions of the Act of June 23, 1937 (50 Stat. 305), compensation from the United States Employees' Compensation Commission under the provisions of section 304 of the Naval Reserve Act of 1938 (52 Stat. 1181), or retired pay under the provision of section 310 of the Naval Reserve Act of 1938 (52 Stat. 1183), he shall elect which benefit he shall receive."

Section 7, title I of the Naval Reserve Act of 1938 is amended to read as follows:

Amendments in Italics

Commissioned officers, *exclusive of chief warrant officers* of the Naval Reserve, including those on the honorary retired list or who may have been retired, when employed on active duty or on training duty with pay or when employed in authorized travel to and from such duty shall be deemed to have been confirmed in grade and qualified for all general service and shall receive the pay and allowances, including longevity pay, as provided by law for the reserve forces of the United States, and shall when traveling under orders or under competent authority receive transportation in kind, mileage, or actual expenses as provided by law for travel performed by officers of the Regular Navy. Midshipmen, *chief warrant officers*, warrant officers, nurses, and enlisted men of the Naval Reserve, including those on the honorary retired list, or who may have been retired, when employed on active duty or on training duty with pay or when employed in authorized travel to and from such

duty, shall receive the same pay and allowances as received by midshipmen, *chief warrant officers*, warrant officers, nurses, and enlisted men of the Regular Navy of the same rank, grade, or rating, and of the same length of service which shall include service in the Navy, Marine Corps, Coast Guard, Naval Reserve Force, Naval Militia, National Naval Volunteers, Naval Reserve, Marine Corps Reserve Force, or Marine Corps Reserve. Aviation cadets shall receive the pay and allowances and other emoluments provided for them in the Act of April 15, 1935 (49 Stat. L. 157; U.S.C., Supp. III, title 34, ch. 15, sec. 861a): Provided, that for the purposes of computing increases in pay of commissioned officers on account of length of service, active service in the grade of aviation cadet shall be considered as commissioned service: Provided further, that when officers or men of the Naval Reserve perform active duty or training duty with pay for a period of less than thirty days, such duty performed on the 31st day of any month shall be paid for at the same rate as for other days; *Provided further, that no chief warrant officer promoted to other commissioned grade or warrant officer promoted to chief warrant officer or other commissioned grade shall suffer any reduction of pay by reason of such promotion: Provided further, that all periods during which chief warrant officers have held commissions in the Naval Reserve shall be included in computing their pay as provided in the Act of February 16, 1929 (45 Stat. 1186);* And provided further, that officers and enlisted men of the Naval Reserve, while employed on active duty or on training duty, with pay, which involves the actual flying in aircraft in accordance with regulations prescribed by the Secretary of the Navy, shall receive the same increase of pay of their grades, ranks, or ratings as may be received by officers and enlisted men in similar grades, ranks, and ratings in the Regular Navy for the performance of similar duty.

Section 309, title III, Naval Reserve Act of 1938, is amended to provide that officers and enlisted men of the Naval Reserve shall be placed in the honorary retired list of the Naval Reserve without pay or allowances upon reaching the age of sixty-four years, or upon their own request, after *twenty years' service* in the Naval Reserve, except as otherwise provided in this Act.

Section 311 of the same act is amended to read as follows:

In time of peace, officers of the Naval Reserve shall take precedence according to such regulations as the Secretary of the Navy may prescribe: Provided, that when mobilized with the Regular Navy for war or a national emergency, each officer of the Naval Reserve shall take precedence next after that officer of the Regular Navy of the same rank or grade whose length of service in such rank or grade on the date of the declaration of such national emergency or war is one-half or the nearest one-half of that of the Reserve officer: *Provided further, that a Naval Reserve officer appointed after the declaration of the war or national emergency shall take precedence, upon reporting for active duty, next after the officer of the Regular Navy of the same rank or grade whose length of service in such rank or grade on the date the Reserve officer re-*

ports for active duty, is one-half or the nearest one-half of that of the Reserve officer.

Section 312, Title III, Naval Reserve Act of 1938, second proviso, is amended to read:

Provided further, that hereafter all officers of the Naval Reserve and the Marine Corps Reserve who may be advanced to a higher grade or rank in time of peace or in time of war or national emergency under the provisions of this Act, shall be allowed the pay and allowances of the higher grade or rank from the dates of rank as stated in their commissions, as distinguished from the dates of commission, or dates of acceptance of commission, and the dates of rank as stated in their commissions shall be conclusive for all purposes.

Section 313, Title III, Naval Reserve Act of 1938, has been amended to read as follows:

Officers and enlisted men of the Naval Reserve shall receive compensation at the rate of one-thirtieth of the monthly base pay of their grades, ranks or ratings, not to exceed \$10 for attending, under competent orders, each regular drill duly prescribed under the authority of the Secretary of the Navy, including drills performed on Sunday, for the organization to which attached, or the performance of an equal amount of such other equivalent instruction or duty, or appropriate duties, as may be prescribed by the Secretary of the Navy: Provided, that no such officer or enlisted man shall receive pay for more than sixty drills or periods of other equivalent instruction or duty or appropriate duties in any one fiscal year: Provided further, that for those performing aerial flights in the capacity of pilots duly prescribed as a part of their training, the pay and the pay limits prescribed by this section shall be increased by 50 percentum for any quarter during which not less than four hours of such flying has been performed: And provided further, that no officer shall receive an increase of pay by reason of the performance of aerial flights, greater than the increase for such reason that may, under the provisions of this section, be paid to Reserve officers of the grade of captain in the Naval Reserve or colonel in the Marine Corps Reserve.

The following are the leading five colleges in reference to the number of platoon leaders furnished and platoon leaders commissioned since the initiating of the platoon leaders' idea for the procurement of Reserve officers for the Corps:

College	Furnished	Commissioned
Dartmouth	61	27
North Carolina	53	20
Boston College	41	15
Washington & Jefferson	43	12
University of Virginia	72	9

CAMP PERRY RESULTS

MARINE CORPS RESERVE WINS SEMIAUTOMATIC RIFLE TEAM MATCH

Special Dispatch to The Washington Post

Camp Perry, Ohio, Sept. 16.—Maj. J. R. Hankins and Lieut. Walter Walsh, crack pistol shots of the FBI in

Washington, helped the United States Marine Corps Reserve to take first honors in the new M-1 semiautomatic rifle team match at the National Rifle and Pistol Matches here this afternoon, to start the last week of the matches.

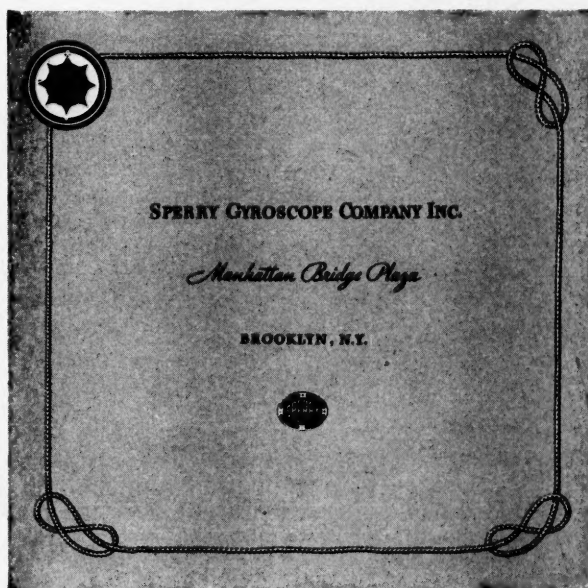
Hankins and Walsh fired 48 and 47 out of a possible 50 with the new rifle.

Other members of the team were Lieut. Henry Adams, Boston, 49; Corp. Paul Alonge, Brooklyn, 49; Gunnery Sgt. Salvador Bartletti, Philadelphia, 50; G. M. Bolen, Indianapolis, 46; Lieut. D. C. McDougal, San Diego, 45; T. J. Saver, Fort Recovery, Ohio, 43, and Lieut. E. O. Swanson, Minneapolis, 45.

TRAVEL ALLOWANCES

The Judge Advocate General has rendered the following decision on the "Right of Reserve officers ordered to active duty, pay and allowances, mileage or transportation for travel to place to which ordered for physical examination to determine fitness for active duty."

"Section 5 of the Naval Reserve Act of 1938, 52 Stat. 1176, provides that any part of the Naval Reserve may be ordered to active duty by the Secretary of the Navy in time of war or when in the opinion of the President a national emergency exists, the act of August 29, 1916, 39 Stat. 591, authorizes the Secretary of the Navy, in time of war or when a national emergency exists to call any enlisted man on the retired list into active service, and the act of August 22, 1912, 37 Stat. 329, and the laws following that act, provide in the circumstances and subject to the limitations fixed by law that officers on the retired list may, in the discretion of the Secretary of the Navy, be ordered to active duty. The appropriation act for the Navy Department for the fiscal year 1941, approved June 11, 1940, Public No. 588, under 'Pay of Naval Personnel'



page 12, provides that 'except during war or national emergency declared by the President to exist, no part of such sum shall be available to pay active-duty pay and allowances to officers on the retired list,' with certain exceptions therein prescribed.

The statutes contemplate active duty and where under the orders as indicated above a physical examination is preliminary to the order to active duty clearly there would be no authority to pay active-duty pay and allowances to take a physical examination to ascertain whether the retired or Reserve officer or man is fit for active duty.

Accordingly, in answer to your question (1) you are advised that retired officers and enlisted men of the regular Navy and officers and enlisted men of the Naval Reserve are not entitled to active-duty pay or allowance for time required in travel to and from a place of physical examination to determine their qualification for active duty

when the place of physical examination is not the place assigned for duty and they do not actually report at the place assigned for performance of active duty. In answer to your question (2) you are advised that the physical examination is no part of the active duty assigned and when such personnel are required to travel to an intermediate place for undergoing the physical examination and thence to the designated place of active duty, they are entitled to pay and allowances only for the required travel time, via the shortest usually travelled route, from the place of taking the physical examination or from their home if their orders permit a return thereto and they do in fact return thereto, to the place of reporting for active duty.

Respectfully,

(s) R. N. ELLIOTT,

Acting Comptroller General of the United States."



The Advance through Mont St. Pere

Capt. H. J. ABBOTT

LEGISLATION

(Continued from page 34)

25, 1938 (52 Stat. 1175), as amended, is hereby amended as follows:

(a) Section 7, title I, by inserting after the words "commissioned officers" in line 1 of said section the words "exclusive of chief warrant officers," by inserting after the word "midshipmen," in lines 8 and 13, page 1177, the words "chief warrant officers," and by inserting after the word "days" in line 28, page 1177, the following provisos: "Provided further, That no chief warrant officer promoted to other commissioned grade or warrant officer promoted to chief warrant officer or other commissioned grade shall suffer any reduction of pay by reason of such promotion: *Provided further*, That all periods during which chief warrant officers have held commissions in the Naval Reserve shall be included in computing their pay as provided in the Act of February 16, 1929 (45 Stat. 1186)";

(b) Section 309, title III, by deleting the word "thirty," in line 5 of said section, and inserting in lieu thereof the word "twenty";

(c) Section 312, title III, delete the second proviso beginning on line 8, page 1184, and insert in lieu thereof the following: "*Provided further*, That hereafter all officers of the Naval Reserve and the Marine Corps Reserve who may be advanced to a higher grade or rank in time of peace or in time of war or national emergency under the provisions of this Act, shall be allowed the pay and allowances of the higher grade or rank from the dates of rank as stated in their commissions, as distinguished from the dates of commission, or dates of acceptance of commission, and the dates of rank as stated in their commissions shall be conclusive for all purposes."

(d) Section 313, title III, by inserting after the word "Navy," in line 5 of said section, a comma and the words "including drills performed on Sunday."

(e) "SEC. 311. In time of peace, officers of the Naval Reserve shall take precedence according to such regulations as the Secretary of the Navy may prescribe: *Provided*, That when mobilized with the Regular Navy for war or a national emergency, each officer of the Naval Reserve shall take precedence next after that officer of the Regular Navy of the same rank or grade whose length of service in such rank or grade on the date of the declaration of such national emergency or war is one-half or the nearest one-half of that of the Reserve officer: *Provided further*, That a Naval Reserve officer appointed after the declaration of the war or national emergency shall take precedence, upon reporting for active duty, next after the officer of the Regular Navy of the same rank or grade whose length of service in such rank or grade on the date the Reserve officer reports for active duty, is one-half or the nearest one-half of that of the Reserve officer."

SEC. 9. The Act of June 24, 1926, entitled "An Act to authorize the construction and procurement of aircraft and aircraft equipment in the Navy and Marine Corps, and to adjust and define the status of operating personnel in connection therewith" (44 Stat. 766) is hereby amended by deleting the word "rigid" in line 10 of paragraph 1 of section 3:

Approved, August 27, 1940.

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ROOM 1038, NAVY DEPARTMENT,
WASHINGTON, D. C.

STANDARDIZED PROMOTION FOR CORPORALS AND SERGEANTS

(Continued from page 30)

worth the time spent. Ignorant and unfitted corporals and sergeants would be eliminated. Candidates for promotion knowing what examinations they would have to stand would do a great deal of work preparing for them and this would make them better non-coms. The feeling that all enlisted men would have that they were working for promotion under a definite and fixed system which was fair to all would pay large dividends in higher morale and in increased interest in their training.

I am certain that every day men are refusing to re-enlist and so are being lost to the Marine Corps because of our present system of promotion.

A few days ago I was discussing promotion of enlisted men with another officer. He told of an incident which is interesting and should be instructive. A private, who had joined the company a few weeks before and whom the officer described as a man of outstanding appearance and bearing, had completed his enlistment and was being discharged. He was an expert rifleman and had an excellent record in every respect. The officer, who was the company commander, asked him why he was not re-enlisting. The man said that he saw many men promoted to corporal with less service than he had and with records not as good. He said that he felt that he had missed promotion through no fault of his own, but because at every post where he had served promotion had been handled in a different way. His company commander told him that promotions were now coming fast and that he would surely be promoted if he re-enlisted, but the man's last words were "No Captain, I'm going to try the Army."

If any officer feels that there is no need to revise our present system of promotion for corporals and sergeants I have a question to ask him. How would he like to have his promotion subject to a system as indefinite and varying as now prevails for enlisted men? His length of service might or might not be considered. He might be given practical or oral examinations, either long or

short. He might have his record considered or it might be ignored. Examinations might come when he was on leave and he would miss being promoted.

To many enlisted men, especially corporals on their second or third enlistment, the Marine Corps is almost as much a life work and career as it is for an officer. To make their career dependent upon a system of promotion such as we now have is unfair to them and ruinous to their morale. It is also unfair to the Marine Corps and highly injurious to its efficiency.

THE GERMAN MAUSER

(Continued from page 27)

good sporting Mauser cheap, for one can seldom be bought for less than one hundred and fifty dollars. Mauser sporting rifles are built in nearly every caliber from the 6-mm. to the 10.75 x 68-mm., three lengths of action being made to accommodate the wide range in cartridge length. The designs are practically identical except for the length.

A good Mauser sporting rifle is a possession of which any man can be justly proud, and I know of no more accurate weapon in the world. Fancy stocking, set triggers, fine engraving, and gold inlays, for which the German gunsmiths are noted, cost a good deal of money but don't improve the Mauser's accuracy.

The current standard German military cartridge contains a boat-tail jacketed bullet weighing 198 grains. The charge of 45.3 grains of nitrocellulose powder gives a muzzle velocity of 2,575 feet per second. The bullet is of the pointed type, having an ogival radius of 7 calibers.

Two other cartridges are used for special purposes by certain branches of the service. The first of these has a 154-grain pointed, concave-base, bullet which, with approximately the same powder charge as the standard cartridge, has a muzzle velocity of 2,880 feet per second. The second has a 225-grain round-nose, flat-base bullet which, loaded with about 43 grains of nitrocellulose powder, develops a muzzle velocity of 2,090 feet per second.

The same rimless case is used in all three cartridges. In exterior dimensions this case is very nearly the same as the U. S. Caliber .30 M1 case (.30-'06). It is possible to chamber a 7.9-mm. German cartridge in a worn Springfield chamber, but should the cartridge be fired, disastrous results would be certain to follow, as the bullet diameter is .311-inch, against the Cal. 30's .308-inch.

Two features of the German cartridges are different from those to which the average American is accustomed. First, the primer is of the Berdan type, in which the anvil is a part of the cartridge case instead of a separate component assembled to the primer cup. Two flash holes, one on either side of the anvil, are used instead of the one in our cartridges. Second, the bullet jacket is made of soft steel which has a thin coat of either cupronickel or copper on the outside. Scarcity of copper is the principal reason for this type of jacket.

THE BIG WIND AT PARRIS ISLAND

(Continued from page 24)

Augmented by preceding hours of rain which had already flooded low ground, and piled high by winds, the water covered Tripoli Street and the waterfront. By nightfall, the Post parade-ground was four feet under, all Main Station quarters had been evacuated, and roads leading to the Main Station cut off. A normal eight or nine-foot tide had been swollen over twenty. With the rising water, both old aviation-hangars, now Quartermaster's storage-spaces (one filled to the roof with personal effects . . .), had collapsed. An artillery-lighter, on the loose, was seen nosing its way past Post Headquarters, nudging the roofs of parked automobiles. Patients from the Naval Hospital were evacuated to brick structures by boat. On all the Post, the least affected area was the old Training Station Quarters, together with the Defense Battalion Barracks, both of which were on ground which, while apparently no higher, was spared the tidal inroads.

After dark, although there was much apprehension of the next high water, scheduled for 0300, the worst passed. Rain and wind continued through the night, but by morning, a surprising quiet could be "heard"—the wind had ceased.

Reconstruction confronted the Post.

First necessity was to take stock of the damage, estimates of which at first reached three millions. No lives had been lost, and there were no major injuries, but from the appearance of Parris Island, an observer would have inferred the worst. All tent-areas presented the impression that they had been stirred in a maelstrom. Equipment, shattered locker-boxes, clothing and tentage were strewn in all directions. Two East Wing temporary barracks were down; both old hangars had simply settled into a morass of Quartermaster property. The causeway across Archer's Creek to Horse Island, exposed to the full sweep of wind and water, was not only blocked by cubic yards of solid debris, but its guardrails (railroad-iron sunk in subsurface concrete anchor-blocks, the whole wired together) had been uprooted wholesale. Live-oak trees and branches blocked virtually every road on the Post. Heavy brick chimneys had collapsed into the roofs of houses, in some instances having to be removed brick by brick, lest the weight bring down ceilings. The power-house, Lyceum and Post Headquarters, not to mention less important structures, were in greater or less degree unroofed. Garage after garage had caved in, often on cars carefully placed inside for shelter. Communication with the world was halted (individuals with battery radios heard with amusement the report of Parris Island's "destruction").

A detailed account of the reconstruction is not within the province of this article. It is sufficient that large and efficient parties were immediately set to work, that roads were opened and supplies gotten in, that salvage was commenced. Recruits scheduled to arrive were immediately diverted to Quantico, where training was carried on for a period afterward. Those already at Parris Island found themselves completely occupied. Power was restored by Monday evening, and even limited supplies of water became shortly available, pressure being on during ten min-

utes each hour. Mail and supplies began to trickle in and out by Tuesday, despite extensive washouts and timber-blocks on adjacent roads, many of which were cleared by Marine Corps crews equipped only with axes, saws, tractors and muscle.

One survivor summarized Parris Island's attitude toward this or other hurricanes in a sentence which should win attention at least for understatement, "... it is pretty well agreed that one hurricane is enough for a lifetime."

That conclusion is entirely correct.

NEW STYLES IN ORGANIZATION

(Continued from page 21)

ment, or other equipment for war. It is useless to decry the innovations and wish for the good old days. To the men of the good old days the military problems no doubt appeared just as complex as do ours to us now, and as will those of future generations when their time comes.

The major changes in the proposed Marine Division are along the lines of providing each echelon with the weapons it requires for the tasks it will probably be called upon to perform, and particularly may attention be called to anti-tank and antiaircraft weapons formerly absent. But artillery pieces and mortars are thrust forward organically into the lower echelons, the division weapons battalion has 75mm guns for the requirements of flat trajectory work of a caliber beyond the capabilities of the 37mm gun, for instance. The regimental weapons company has the 75mm howitzers which may be used as accompanying guns in the lower echelons, or in support by the regiment itself, to supplement the divisional artillery, or where this is not available. Mortars of the 4.2 chemical type are provided for the usual chemical warfare requirements, but with the hope also that H.E. ammunition may be made available for this weapon, enabling it to supplement the 81mm mortars, particularly in the early stages of a landing.

The battalion weapons company is simply an extension of the old machine gun and howitzer company to include the 81mm mortars and some dual purpose .50 caliber machine guns. Down in the company the fire base is constituted by the employment of .60mm mortars which are shortly to supplant our rifle grenades. Details of the company, platoon, and squad are still in the process of adjustment, but we may be certain that whatever the precise nature of the lower units, they will embody the principles herein mentioned with respect to their self-sufficiency, within the scope of their probable battlefield task, for fire and movement.

The divisional artillery is proportioned, one light battalion to each infantry regiment, plus one battery of 155-mm. Here we depart from the army division and the German infantry division in the caliber of our weapons, the 75mm howitzer, which in those two is replaced by the 105 howitzers. It is felt that the handiness of the smaller weapon, plus the probable availability of ship's gunfire support compensates for the smaller effectiveness of the 75-mm. In counter-battery work, the 155mms balance with those of the other divisions, and we can hope to place out

of action as many 105mms opposed to us as the enemy can of our 75mms, not counting what the ships' guns will do. So in the retention of the 75mms we have had to make concessions in range and weight of metal to retain the mobility, handiness, and capacity for concealment inherent in the smaller weapons. The nature of our probable employment seems to warrant this for the present.

The infantry regiment itself is modified by the additional weapons it possesses and by a new feature: the air and parachute troops. This project is yet in its infancy, and one cannot tell what is to be its final form. The Marine Division, in the effort to be self-sufficient, must be a jack of all trades. The Army can afford better than can we to maintain special units of various kinds, because of its greater size and consequent extent of its effort. But only experience can show which is the best method for us to pursue in the organization of this element in modern war which is employed in the "vertical envelopment." It seems fairly obvious that this method of attack will be attempted in future landing operations, hence we must prepare ourselves accordingly.

Before departing from the subject of the infantry regiment, it may be of interest to mention that one of the proposals submitted contained two ordinary regiments as now constituted, and one special regiment which consisted of a reconnaissance battalion with light armored vehicles and motorcycle troops, the tank battalion, with its heavy hitting power, and a battalion of motorized infantry. One may recognize in such a formation the pattern of the "Panzer," on a very modest scale to be sure. It may come to pass that such a force may be got together in a task group from the elements now composing the division in its present form, or it may be that the best results can only be obtained by putting these elements into the same "team" and calling them a special regiment, or an armored regiment. Again we must proceed with caution until experience shows us the way more clearly.

The unit known as the "scout company" will probably contain some armored vehicles and motorcycle troops. The motorcycle troops furnish the armored vehicle platoons their local security and both together furnish the division with long range security and information. They have the speed and range to cover considerable areas, and enough hitting power to fight for their information when necessary. Backed up by other elements, they are capable of seizing and holding advantageous positions, or even of driving through a weak spot in advance of the tanks, thus initiating a break-through. Many are the conceivable uses to which this unit can be put in landing operations.

The addition of another company to the engineer battalion has no particular significance beyond the recognition that landing operations require a greater proportion of engineer troops than were hitherto supplied. However, the tactics of the future in their employment will have to bear in mind the close teamwork of the German engineer troops with the other forces employed in the capture of the Belgian forts. These troops are indeed "combat engineers" and it is difficult to overestimate their importance.

No special mention is necessary with respect to the Medical Battalion, whose functions, like those of the engineers are also combat functions and require the greatest degree of teamwork.

Of the Service Battalion we may remark that it should take care of supply, of motor transport, and of maintenance (including a section to care for the ordnance of the division); and that here, too, we have an example in the recent campaigns in Europe of the value of a well prepared, well coordinated system of services which contributed as much as any other element, to the successes of the victors.

Finally, we have given the proposed division an aviation group, and it is likely that it will shortly have a wing of two groups. Neither the German infantry division nor the Army division are so supplied, but the cases are entirely different, since each of these may operate as a small portion of a large mass as a rule, while for us the rule is more in the direction of independent action requiring the closest support of the air arm as an integral part of the team.

It is the hope of the writers of this article to convey the general idea behind the new proposed division, and to induce in the readers a reaction of sound and constructive criticism which, conveyed to the proper sources, may result in its ultimate improvement. Sound organization is the basis of effective preparation for war; industrial organization in the civilian field, and military organization within our own. At no time in our history has it been so imperative that we do our part to create, with the human and material elements at our disposal, the most effective fighting team possible.

ACCURACY VERSUS VOLUME IN RIFLE FIRE

(Continued from page 9)

150 rounds of ammunition each man carried, and then, pinned down by the Boer rifle fire, were forced to lie there in the hot sun, without ammunition and suffering from thirst, waiting for the relief of darkness. Practically the same story, of troops pinned down for hours by accurate rifle fire at ranges up to 800 yards, is the account of the battles of Colonso, Paardeberge, Nitrals Nek and many other actions.

It is interesting to note, but difficult to follow the reasoning of the German analysis of several of these battles, particularly Magersfontein, "the pessimistic views which were expressed after the Boer War, with respect to the difficulty of attacking troops armed with modern firearms have been very considerably exaggerated."

The view expressed by Col. Mayne in his book "The Infantry Weapon" would seem to be close to reality. He said "modern rifles in the hands of trained and undemoralized men mean that 800 yards is the nearest in open country that troops can come without help from artillery, night, fog, or God." The remarks made about night, fog or God seem to foreshadow remarks made by Liddell Hart 30 years later.

Although this war was closely analyzed by almost all other armies, they largely disregarded the lessons to be learned. The French disregarded the war entirely, and going off the deep end, became hypnotized with their doctrine of the offensive. The Germans and the United States decided that the war was fought under peculiar conditions,

and that their idea of having one rifleman per yard of front was still correct tactics.

But to some extent the British got the idea on the second lesson. In fact, some of them got the idea on the first lesson. For Ian Hamilton, the young survivor of the Battle of Majuba Hill, went to India, where under Lord Roberts he introduced new marksmanship and musketry regulations for the Indian Army, using silhouette, moving and disappearing targets for the first time. These innovations met with intense disapproval at the War Office in London, but were eventually approved just before the second Boer War. As in other cases, the decision was a little too late to be effective in the war then in progress.

However, after the second Boer War, the British went in strongly for marksmanship, largely under the influence of Lord Roberts, who in one of his many speeches urging an intensified teaching of accurate marksmanship said "The two points that the war in South Africa brought forcibly to my mind are, first, the necessity for making our soldiers good shots, and secondly, for developing their individual intelligence." This influence was to be strong enough that by the time of World War I the small British Regular Army was as good as, or better than, any other army in the world in the quality of their rifle shooting.

In the wars occurring between the Boer War of 1900 and World War I there is little to show, in one way or another, the value of accurate rifle shooting. This was largely because the opposing forces made little use of marksmanship training. In the Russo-Japanese War there were some isolated actions in which the Russian troops involved showed themselves to have received considerable marksmanship training. However, the training of the majority of the Russian troops may be deduced from Suvarow's maxim, "The bullet is a fool, only the bayonet is wise." In the Spanish-American War only the regular troops had had any real training with the rifle, but its effectiveness was demonstrated both in Cuba and the Philippines.

Then came World War I. In this war, true to their doctrine of "l'offensive a l'outrance," the French went in more for shock tactics with bayonet charges than for training the troops in shooting their rifles. Little more was done than to have a small amount of gallery training at a range of 40 yards, and even this depended upon the initiative of the individual garrison commander.

The Germans entered the war with more training in marksmanship than the French, but they were more concerned with the accurate control of the fire, than with producing accurate fire to be controlled. Which seems to be putting the cart before the horse. For there is little use in building an accurate control for a machine if the parts of the machine itself are inaccurate.

The small British Regular Army entered the war with the best trained troops of any so far as their rifle shooting was concerned.

And it was lucky for both the French and British that this was so. For in the early battles, especially the fights at Mons and near Le Cateau, it was only their marksmanship that saved them from being completely overrun, and the training of the foot soldier was to partly redeem the mistakes of the commanders.

Near Vimy, in the Mons battle, the Germans first at-

tacked in close formation. The accurate British rifle-fire swept away the first few waves. Then the Germans formed into small groups and again advanced. These too were swept away by the rifle fire. Finally the Germans put down a heavy artillery bombardment on every foot of the British line, and managed to advance after terrific loss. The Germans were so impressed with this rifle fire that they could not bring themselves to believe that it was really rifle fire. Instead they reported, and for a long time believed, that the British line was just one machine gun after another.

However, the remnants of this regular army were scattered through the "New Army" or promoted to ranks where they no longer fired rifles. And the "New Army" was so hastily trained, and the instructors were so hypnotized by the unfamiliar conditions of trench warfare that little or no attention was paid to teaching them more about their rifles than how to load them and to point them away from their friends. Instead they were given intensive training in close order drill, trench digging and bayonet practice.

Until all armies organized sniper corps and put many more machine guns in the lines, it was possible for men to get up out of the trenches, and move about standing up in the open, when within 300 yards of the opposing trenches, and not have a single shot fired at them. Their opponents thought they could not hit a standing man.

It was not long before the opposing sides found that it was necessary to develop their rifle shooting again. The British were more successful at it than any of the others. A German World War Lieutenant writing in the *Militär-Wochenblatt* describes how effective the British snipers were, saying that even loop-holes in sandbag parapets became death-traps. He further said that the Germans were handicapped because they had no confidence in either their marksmanship or in their rifles.

Finally in 1916 the Germans began to see that in order for the infantry to cover their own advance after their own artillery and mortar barrages had lifted, the principle of individual marksmanship was required. Reliance on the old idea of pure musketry or the accurate control of a volume of fire was not enough to get results against hidden scattered machine gun nests protected by riflemen. So new tactical manuals were issued, changing the regulations which required a man to fire straight to his front regardless of whether he saw a target or not. The new manuals encouraged the men to look for targets, especially on the flanks, and to concentrate their fire on where they knew there was an enemy rather than to continue to spray the countryside with lead.

But it was not until the arrival of the Americans that, for the first time since Mons and Ypres, units were to be in the field that had been well trained in marksmanship. These units were the Brigade of Marines and most of the regular Army units. The training of the National Army units, as will be shown later, was deficient.

The Second Division, on its entry into battle in June 1918, was to cause the Germans to report that the most demoralizing factor they encountered in the whole war was the aimed rifle fire of these American troops. The German units opposed to the Marine Brigade recorded in their war records that the American units opposed to

them held their front lines with snipers and special sharpshooters. As a matter of fact they were just plain ordinary Marines who had been well-trained with the rifle.

In this defense near Chateau-Thierry, the Second Division helped to halt the German drive on Paris, and their efforts were almost entirely without the usual heavy artillery support and in large part without sufficient machine gun support. When the Second Division took part in the savage counterattack that broke the German attack it was almost totally lacking in artillery support, and its success was due to the confident, driving power of the Americans, and their skillful use of the rifle in stalking and outflanking machine guns.

When the Second Division took part in the offensives of July 1918 and September 1918, the German units opposed to them were to record again and again their fear of the accurate American rifleman, who not only believed he could hit the enemy at ranges up to 600 yards, but made it an habitual practice to do so. General Pershing after reading the reports on these actions was to increase his demands that the units of the National Army and the replacements for the regular Army regiments be given a thorough training in the rifle before coming to Europe.

The success of these units in using their rifles was caused by having had thorough training in marksmanship. The Regular Army units of the Second Division were unfortunate in that their replacements were not as thoroughly trained. However, the Marine maintained a uniformly high standard of ability with the rifle due to the fact that all replacements received not less than three weeks' intensive training with the rifle, and usually up to six weeks' intensive training, which would seem to be plain common sense. Since the rifle is the main weapon of the foot-troops they should be well trained in the tool of their trade.

The lack of training with the rifle in the Army units sent over-seas was to be a serious difficulty for Pershing and he sent numerous cables, urging, imploring, demanding that all units complete a thorough training with the rifle at ranges up to 600 yards. For a number of reasons, lack of good instructors, lack of ranges, influence of French and British instructors, whose main interest was in trench digging, and apathy of people in charge of the training, little attention was paid at home to Pershing's demands. Even at the end of the war he was still complaining about troops being sent over who had never fired a rifle, even after four months' training. And General Harbord could remark that "men arrived in France who had never fired a rifle but who were good at close-order drill and had been led in mass singing."

Thus, except for isolated units such as the Marine Brigade, the American troops were to fall behind the standards of battlefield marksmanship set in previous wars. Some of the French were to remark that the Marines made a fetish of rifle marksmanship. It seems to have been a profitable God to worship. Such caustic comment hardly seems reasonable from an Army that had believed that gallery rifle training at 40 yards, and a bright blue woolen coat were enough to overcome machine guns.

The present war, World War II, has afforded two valid examples of the value of good rifle marksmanship.

The first example is that of the recently concluded Russo-Finnish War. It is true that the war ended with a disas-

trous separate peace for the Finns. But, the only thing that saved them from total defeat was the high state of training of the Finnish Army and Territorials. This training had as its very foundation a thorough training in rifle marksmanship in all its phases.

Under the Tsars the Finns had been forbidden to possess arms. As a consequence in the Finnish War of Independence they found themselves under a handicap due to their lack of training with the rifle. Having gained their independence they resolved to never again be placed in such a disadvantageous position. This resolution resulted in a training only matched by the Swiss, and the Northern nations, the Norse, the Swedes, and the Letts. All of these small nations endeavor to replace lack of numbers by thorough training.

The major part of the Finnish forces was made up of the Territorials, corresponding to our National Guard. Almost every able-bodied Finn took an active part in this organization, both before and after his short period of conscripted service in the regular army.

On joining the Territorials the Finn was classed as a learner. Before he could advance to Class One, he had to qualify with the rifle. Before advancing to Class Two he had to complete a course in tactics of small units and again qualify with the rifle. To advance to Class Three he had to demonstrate his ability with the rifle as a member of a small unit in a field combat problem and also demonstrate his ability to handle such units in such problems. To graduate to Class Four he had to again complete a course in tactics and to qualify both as a shooter and instructor with the rifle. It need hardly be mentioned that the members of the regular Army received an even more thorough training.

As further proof of the training of the Finns with the rifle the reports of the Territorials General Staff for 1936 may be cited. According to this interesting document, in 1934, over 14,500 rifle matches were held all over the country, with over 300,000 selected competitors. In the big target match in the Spring there were 14,000 to 15,000 competitors in both range and field matches. The report states that there is hardly a village without its own rifle range and gunsmith. Matches are held throughout the year regardless of weather.

The Russians, on the contrary had little interest in training for accurate marksmanship, relying, as in the past, on an overwhelming weight of numbers in men, artillery and aircraft. When the Finns' ammunition supply began to run out, the Russians began to succeed, but not before the Finns had presented what should be conclusive evidence of the value of accurate marksmanship. The Finns, woefully inferior in numbers of men, guns and aircraft received an estimated 30,000 casualties, while they inflicted over 250,000 casualties.

The second example of the value of rifle marksmanship is the German conquest of Poland. This campaign is a fine example of the value of thorough training based on the realities of the battlefield.

Following the Versailles Treaty the Germans had plenty of time to analyze the lessons taught by World War I and they applied them both in the training of the limited army of 100,000 allowed them by the treaty and in the con-

scripted masses they raised after Hitler's accession to power.

As a result of their study the Germans have armed every man of their army with a rifle, including the men in the artillery units and in the ground troops of the air force. There are a few people who are not so armed, such as communication and light mortar personnel who are loaded down with portable radios or parts of the mortar assembly. Otherwise, all troops are armed with a rifle.

Further, all troops are given thorough training with a rifle. Every garrison has a rifle range nearby which is used the year around for range work. They carry the training to its full completion with numerous field firing problems but they continually return to the training in individual marksmanship. Some units carried out training schedules that included two days a week devoted to marksmanship.

The amount of close order drill has been reduced tremendously. This is done for two reasons. First, in order to gain time for the intensified training of the individual, designed to develop his individual intelligence, initiative and self confidence. And second, since they believe that the necessary military discipline is acquired by all the various exacting drills with weapons, in combat formations, gas discipline, use of terrain and camouflage.

The value of this kind of training, the training that raises the efficiency of the army as a whole, by its emphasis on the efficient training of the individual, was amply demonstrated in the Polish campaign. It should be noted that the emphasis in training was on the use of the individual's weapon, the tool of his trade, and that all troops were armed with the rifle, either as primary or secondary weapons.

Thus, at long last, we reach the conclusion that history proves the theory correct. Accuracy with the rifle is of more value on the battlefield than volume of fire.

Since both theory and practice prove that accuracy of rifle fire is more effective than inaccurate volume of fire, the second argument that there will not be sufficient time available to teach raw recruits to shoot accurately does not seem to be very logical. For the importance of accurate shooting would seem to warrant the conclusion that sufficient time for training must be allotted.

However, even the argument itself is based on false premises, the basis being the fact that in World War I men were sent over-seas without having fired a rifle after four months' training at home. Therefore it is said that the last war proved that even four months' training was not sufficient time in which to give thorough marksmanship training.

This would seem to be a strong argument if it were not for the fact that an examination of the G-5 reports and of the training schedules of training centers in the United States discloses that little attempt was made at home to teach the men their most important duty, the use of their weapon.

These training schedules called for 18-week training periods, divided into sub-periods of three weeks each. In the first three sub-periods or nine weeks, there were 324 training hours. Of this time 192 hours were devoted to close order drill, and school of the squad, platoon and company. Only twenty hours were devoted to preliminary

marksmanship, such as position, and sighting and aiming exercise. The remaining 122 hours were devoted to entrenching, scouting and patrolling, camouflage, combat formations, and other subjects.

In the second nine weeks there were nine hours devoted to preliminary marksmanship and two weeks to a period on the range. This range period was frequently passed over (hence Pershing's cables) under the influence of French and British instructors who wanted more trench digging and close order drill.

Here we see why four months was not sufficient time to train men in accuracy with the rifle. Under that system of training a lifetime would hardly be sufficient. In the first nine weeks over 50% of the training would never be applied on the battlefield and less than 7% of the time was used in teaching the use of the rifle.

So we can discard the argument that time will not allow sufficient training in accurate marksmanship. History shows that time will allow such training. And since history also shows that such training is both desirable and necessary, sufficient time must be allotted. A commander would be reluctant to send his artillery into action if the shells were not loaded with the proper charges; he should be just as reluctant to send his infantry into action if his men are not fully trained.

As to the last argument that the adoption of a semi-automatic rifle will send such a hail of bullets across the battlefield that accuracy will be unnecessary, it has already been shown that the character of individual rifle fire is such that this is an impossibility. It is an impossibility even if the rifle functions perfectly and there is an unlimited ammunition supply.

A semi-automatic rifle, instead of requiring less training in marksmanship will call for an increased amount of training. The history of all fire-arms shows that as the power of the fire-arm is increased the training required is increased even more.

Those who hope that the introduction of a semi-automatic rifle will result in less of the (to them) "monotonous" marksmanship training disregard the true purpose of such a weapon. This purpose was recognized before World War I as shown in a letter of the younger von Moltke to Ludendorff, as follows: "I must insist that in the infantry action it will not primarily be a question of shooting more with an automatic rifle. It is rather that its greatest advantage lies in the fact that the infantryman will be able to shoot more accurately and easily than under the old system, thanks to less 'kick' and the partial elimination of loading movements, especially in rapid fire."

The same idea is embodied in the French training regulations, "Skill in fire results from two elements, which are, in the order of their importance, accuracy and rapidity. This last ought never to be acquired to the detriment of the first."

Thus we see that the adoption of a semi-automatic rifle, far from reducing the amount of accuracy needed, actually increases it; and the amount of training required is correspondingly increased. For since the individual capacity to expend ammunition is increased, the individual training required to achieve results with the expenditure of the ammunition is likewise increased. It is not "rounds per minute" that gets results. It is "hits per round per minute."

If a soldier gets one hit in ten rounds a minute compared with a soldier who gets one hit in 30 rounds per minute shooting a semi-automatic rifle, the latter has less actual fire power than the former.

It is significant that at the same time that all other nations are emphasizing, according to their national ideas of marksmanship, the need for increased accuracy in rifle shooting, none of them have adopted a semi-automatic rifle. And there have been plenty of various types offered for adoption.

The reasons are two-fold. In the first place the lessons of the last World War show that even in a stabilized situation the supply of ammunition to the front line troops is a most difficult problem. In most cases it could not be carried out, or was only carried out at great sacrifice. That is amply evidenced by the large number of citations and decorations given in the last war, not for fighting, but for getting ammunition to the fighters. The interruptions in battlefield supply will be even greater in the future, due to the increased use of aircraft against rear installations and the inclusion of high-angle-fire weapons in the forward units. To those who say that every faster firing weapon has been objected to on the grounds of ammunition, they may be reminded that soldiers today can carry no more ammunition on their person than they have since the introduction of magazine rifles. And further, that the tendency in modern armies is to carry less ammunition on the person in order to increase the mobility of the foot soldier. In the Polish campaign the German infantry carried only 125 rounds on their person. Our own Army, even though about to adopt the M-1 rifle, contemplates only 116 rounds carried by the soldier, according to an article in the *Infantry Journal* by General Lynch, the present Chief of Infantry.

The second reason is that the use of such a weapon would be an attempt to pervert the infantryman from his true purpose, by attempting to make him a two-legged machine gun. This has been expressed by Liddell Hart in the following quotation, "For volume of fire infantry cannot compete with mechanized arms—extreme accuracy of fire is the only justification for the infantryman. The only infantryman of use in modern warfare is one so highly trained in the use of cover that he can stalk machine guns, and so highly trained as a shot that he can pick off their crews."

There are other arguments against adopting the proposed model of semi-automatic rifle. Compared with the 1903 rifle it is less accurate, has less range, has less penetrating power, is considerably less reliable, is more expensive and difficult to make, requires more care to keep it functioning, and will necessitate the adoption of an ammunition that reduces considerably the effectiveness of the .30 caliber machine gun. These defects are enough to make the value of such a rifle extremely questionable. But in addition, the fact that the purpose of its adoption would be a negation of the mission of the infantryman, would make its adoption a fatal error, if not to the nation, at least to many of our soldiers in war-time.

Before summing up there is one important point that should be emphasized. And that is the effect on morale given by excellent shooting. It would be well to remem-

ber Napoleon's oft-quoted maxim—"The moral is to the physical as three is to one."

With that emphasis on morale we can recall that in the Revolutionary War, the War of 1812 and the Civil War, it was the troops who could shoot and who knew that they could, that were the hardest to beat. The men felt that as long as they had their rifles and ammunition they could not be beaten. Conversely, the opposing troops had the helpless feeling of being hit without being able to hit in return. The Germans, in World War I, describing the demoralizing long range fire of the Americans, have testified as to the strength of that feeling.

The same was recorded in the Boer War when numerous participants or eye-witness observers described the demoralization, the feeling of despair, that overtook the British foot-soldier when his own fire (based on the theory of volume of fire) was so ineffective compared with that of the Boers (accurate, aimed fire). There are numerous descriptions of how, in desperation, bodies of British troops would surrender to smaller Boer forces. They just got tired of being hit without being able to hit back.

The confidence, the morale, the belief in one's self that skill in the use of weapons brought to some of the troops engaged in these previous wars is more than ever necessary. Ludendorff in his book "The Nation at War" has described the necessity. "Modern conditions have led to a loosening of the units within reach of the enemy's fire, thus isolating every individual soldier to an extent never known before—making enormous demands on the morale, courage and training of the individual; and in order to give him morale and courage his training must be most thorough."

The morale, the initiative, the spirit of confident daring that results from such training that every individual feels himself a master of his weapon, was well illustrated in the Russo-Finnish War and in the German-Polish campaign. The attitude that it breeds in the men is illustrated by the remark of a young Finnish member of the Finnish Legation in Washington, D. C. Speaking to the writer about the Finnish training, he said, "When a Finn takes cover he does not just take cover, he gets a place from which he can shoot the enemy."

Modern conditions have made obsolete a reliance on the type of morale bred by close order drill, a kind of mass courage, a feeling of companionship and comfort from the close grouping of men, a confidence in the mass of which the individual feels himself a part. Instead the individual must have confidence in himself as an individual, and instead of a feeling of confidence in the mass, as a mass, he must have confidence in the individuals who compose that mass. And this personal morale and confidence can only be developed by a training of the individual which makes him a master of his weapon and develops his intelligence and initiative. For the infantryman this training with his weapon, the rifle, must be such as to make him able, and know that he is able, to hit anything he can see.

Having made an examination of the various arguments of those who believe we should replace accuracy of rifle

fire by volume of rifle fire, we can see that none of them are based on fact, but only on delusions as to the characteristics of rifle fire, the lessons of history and the abilities of semi-automatic rifles.

Far from reducing our training in marksmanship we should increase that training and make every effort to make it more effective. Not only should we keep our present range marksmanship courses, in order to form the correct habits of mind, eye and muscle, but we must give habits proper exercise for battlefield work by holding practices on moving and disappearing targets and by holding field combat exercises. Our efforts must be to produce the kind of battlefield shot that Jackson had at New Orleans. The kind who can "put something in the pot with every shot."

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